LIBRARY OF CONGRESS
AUG 20 1888
153 1
CITY OF WASHINGTON

PRICE 15 CENTS.

AUGUST 18, 1888.

THE AMERICAN ARCHITECT AND BUILDING NEWS

VOL. XXIV. REGULAR EDITION NO. 660.

ARCHITECTURE

ENGINEERING

DECORATION

CONSTRUCTION

TICKNOR & COMPANY

BOSTON MASS.

CONTENTS.

Editorial Summary.

Architect, Owner and Builder before the Law.—IV.

Builders' Hardware.—III.

Equestrian Monuments.—III.

Letter from Baltimore.

" " Chicago.

" " London.

Notes and Clippings.

Trade Surveys.

ILLUSTRATIONS.

The Goddard Chapel, Tufts College, College Hill, Mass.
(Helio-chrome issued only with Imperial Edition.)

Gothic Towers and Spires.—Beverly Minster; Litchfield Cathedral; St. Mary's, Saffron Welden.
[Issued only with the Imperial Edition.]

Competitive Design for a Dormitory for the University of Pennsylvania.

The Horses of Marly, Paris, France.

Castor and Pollux, Rome, Italy.

Children's Ward of the Presbyterian Hospital, Philadelphia, Pa.

Citizen's Bank Building, Frederick, Md.

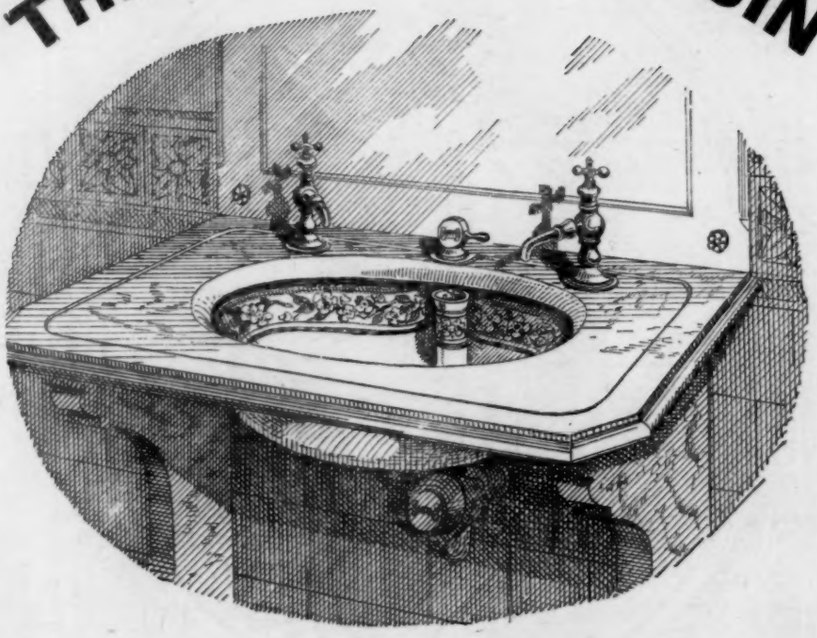
SANITAS BASIN LIFT.

+ PLUMBING + SANITAS + APPLIANCES +

PLAN OF BASIN.

THE SANITAS BASIN

QUICK EMPTYING, ORNAMENTAL.



STAND-PIPE OVERFLOW.

WITH SANITAS TRAP ATTACHED.

CAUTION!

THE GREAT AND UNIVERSALLY ACKNOWLEDGED MERITS of the Sanitas Appliances have given rise to a number of inferior imitations and infringements, against the use of which the public are hereby cautioned. The "Sanitas" is the original open Stand-pipe Basin, having a removable stand-pipe, operated by a mechanism fixed in a frame above, and the "Sanitas" Trap, the only one having the horizontal water-way arranged to render the trap self-scouring and anti-siphonic, and having the reflecting partition within the body. All those who manufacture or use these features, or others in our Patent claims, in any form, are infringers and will be prosecuted for damages.

THE "SANITAS" MANUFACTURING CO., 207 TREMONT ST., BOSTON, MASS.

Branch Offices: 64 Gold Street, New York, N. Y. 229 Walnut Street, Cincinnati, O. 47 to 49 Dearborn Street, Chicago Ill.

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. XXIV. Copyright, 1888, by TICKNOR & COMPANY, Boston, Mass. No. 660.

AUGUST 18, 1888.

Entered at the Post-Office at Boston as second-class matter.

CONTENTS.

SUMMARY: —
The Relation between Sewer-Gas and Scarlet-Fever — Inflicting the Death-Penalty by Electric-Shock. — Aërial Navigation by Gravitation. — The Locomotive Method of the Sea-Gull. — The Parachute offers a cheap Means for Experimentation. — Drain-Pipes of a New Shape. — The Imported Rector of Holy Trinity Church 69
ARCHITECT, OWNER AND BUILDER BEFORE THE LAW. — IV. . . 71
BUILDERS' HARDWARE. — III. 72
EQUESTRIAN MONUMENTS. — III. 74
ILLUSTRATIONS: —
The Goddard Chapel, Tufts College, College Hill, Mass. — Gothic Towers and Spires, Plates 22, 23 and 24. — Competitive Design for a Dormitory for the University of Pennsylvania, Phila., Pa. — The Horses of Marly, now at the Entrance to the Champs Elysées, Paris, France. — Castor and Pollux of the Capitol, Rome, Italy. — Children's Ward of the Presbyterian Hospital, Phila., Pa. — Citizen's Bank Building, Frederick, Md. 76
LETTER FROM BALTIMORE. 76
LETTER FROM CHICAGO. 77
LETTER FROM LONDON. 78
NOTES AND CLIPPINGS. 80
TRADE SURVEYS. 80

THE relation of sewer-gases to scarlet-fever and diphtheria, which has been regarded as obscure, if not doubtful, seems to be strikingly shown by a letter from Mr. A. R. Carter, of the Health Department of Baltimore, to the *Scientific American*. Mr. Carter says that during a period of fifty-four years, from 1830 to 1883, there were twelve thousand, one hundred and ninety-seven deaths in Baltimore from scarlet-fever, an average of two hundred and twenty-six per year. In 1883, three hundred and thirty-four fatal cases of scarlet-fever occurred, and, taking into consideration the increase of the city in population, this may perhaps be taken as the normal number, under the conditions then existing. On the first day of January, 1884, an ordinance for the regulation of plumbing went into effect, and has since been enforced with tolerable strictness. During the year 1884 there were one hundred and four deaths from scarlet-fever, or less than one-third as many as the year before. In 1885 the number was sixty-eight, or about one-fifth that of 1883; In 1886 there were thirty-two fatal cases, and in 1887 thirty-six, the mortality for these two years, after the administration of the ordinance had begun to produce some effect, having been only about one-tenth as great as that of 1883, the year before it was adopted. This extraordinary success, considered in connection with the Detroit experiments in disinfecting the sewers, point plainly to the way in which the most dangerous of children's diseases may be kept under control, if not extirpated entirely, and the public will await anxiously the next step which sanitary science may make in this direction. As at Detroit, the Baltimore Health Department found that the mortality from diphtheria was greatly influenced by the enforcement of the new law. During the seven years prior to 1883, the average number of fatal diphtheria cases in the city was four hundred and sixty-nine annually. Since 1883, although for the first year or two the ordinance could not have received sufficiently extensive application to be very effective, the annual average has been two hundred and thirty-four, or almost exactly one-half of the previous average.

AS most people know, the penalty of death by hanging is to be abolished in the State of New York after this year, and the few persons whom New York justice sees fit to remove from this life as a warning to others are to be made way with in the most modern, scientific and humanitarian manner, by means of electricity. How the electricity is to be applied, no one seems to know, but the Legislature of the State appears to have had a vague idea that, if any of its constituents should ever need to be executed, which, judging the immunity extended to Chiara Cignarele, must be a very remote contingency, there would be something grand and modern in applying a tame thunderbolt to them, in place of the hangman's noose, and that a way would be found for making the application when required. Fortunately, perhaps, for the peaceful part of the community, a few patriotic citizens have taken steps to investigate the subject of electrical execution, and it is to be hoped that they will be able to devise an effective method by the time it is required. A few experiments were made, a year or so ago, at Buffalo, by a commission appointed by the Governor, to try to discover the most humane method of carrying out a death sentence, and the conclusion reached by the Commissioners was that the dogs, which were used as illustrations, died most comfortably by being first chloroformed, and then placed in a tank of water, after which a wire was wound around their noses, and the poles of a dynamo connected with the wire and the water. Interesting as this observation was, it shed very little light on the point to be studied, for the obvious reason that criminals are by no means so easily chloroformed as dogs, and without taking away their senses by anæsthetics it would be next to impossible, even if it were desirable, to put them into tanks of water, and wind wire around their noses, preparatory to administrating the fatal shock. Feeling that something still remained to be done, Mr. Harold P. Brown and Dr. Frederick Peterson made use of Mr. Edison's laboratory at Menlo Park for the purpose of trying some further experiments on dogs, and, with the help of the appliances of the laboratory, they have arrived at interesting results. It is found, among other things, that the resistance of different animals to the passage of the current differs greatly, one being not at all injured by a current of fourteen hundred volts intensity, while another died instantly under a current of one hundred and sixty volts intensity. It seems that the resistance lies chiefly in the skin, and is much increased if the skin is covered with hair, and, supposing a current of ample intensity to be provided, it may be difficult to get it to enter the victim's body, unless his hair is at least shaved off at the point of application of the poles. Moreover, the resistance increases with the area of the pole-terminations, so that the iron chair advocated by some persons, in which the patient was to be seated, would be likely to present too large a metallic surface to enable the current to pass freely into the body, while as Dr. Peterson points out, a strong current applied in this way would burn and disfigured the skin. The result indicated by the experiments was that murderers would be most certainly and comfortably disposed of by shaving the top of the head, or cutting the hair very short, wetting the scalp, and applying a small electrode, not more than a quarter of an inch in diameter, while the other electrode, furnished with a wet sponge, should be applied to one of the wrists or to the small of the back. A charge would then pass through the brain and upper part of the spine, instantly extinguishing life, in a manner "rather agreeable than otherwise." If carried out decently, such an execution would have nothing objectionable about it, unless perhaps to the patient, but if there were any uncertainly about the application of the current, the scene might be horribly prolonged by the struggles of the person to be operated on. Apparently, the best application of all would be a lightning flash, or a current of similar intensity, which could be discharged without warning, and without the nervous agony of adjusting sponges and wires. At present, no one knows exactly the tension, as indicated by volts, of a lightning flash, but it is very high. In fact, the energy of the thunderbolt comes almost entirely from its intensity, and very little from the quantity of electricity contained it it, a recent computation having shown that the electricity in an average discharge of lightning would keep a single incandescent lamp, of the ordinary kind, in operation only two or three minutes.

WE regret very much to find that a contemporary for which we have so high a regard as the *Sanitary News* wants the Commissioner of Patents to keep a loaded gun ready to shoot us with, on account, as it appears, of the dangerous mental disorder shown by our modest comments on the de Bausset flying-machine which were printed the other day; and, as we should object to such treatment, we hope we may assuage the *Sanitary News's* alarm by a little further explanation of what it considers our "audacious" idea of the possibility of utilizing gravitation as a means of propelling air-ships, after the method "said to be practised by some birds." It is hardly necessary to say that every one interested in aërial locomotion watches the flight of birds with anxious curiosity, to see if anything can be learned from them which may help in solving the

great problem, and observers have not yet been able to determine whether the propulsion in flying comes partly from the wings, or wholly from gravitation. With the larger birds, such as the sea-gull and hawks of different kinds, the flapping of the wings serves mainly to lift the body vertically, or nearly so, into the air, the effect being produced by the arrangement of the feathers of the wings, which, when the wings are moved upward, open like blind-slats, allowing the air to pass between them, but, when moved downward, lap upon each other in such a way as to prevent the passage of the air, and enable the wings to exert a powerful downward pressure, which lifts the body in proportion to the effort. The familiar Arnott valve, used in ventilators, the slats of which remain open so long as the draught is into the flue from the room, but close against the slightest down-draught, gives an idea of the action of the wing-feathers in their alternate upward and downward movement.

'HS any one may see, by watching a sea-gull rise from the water, a violent and prolonged flapping is first necessary, to lift it vertically, or nearly so, into the air. When it has reached a certain altitude, the flapping stops, and a slight movement of the wings brings the bird into such a position that, with its wings outspread but motionless, it slides down the air, or in other words it allows gravitation to draw it toward the earth, only utilizing the resistance of the atmosphere under its wings to change the movement from a fall vertically downward to a gradual descent, at a comparatively slight angle with the horizon. If the wings were immovable, the motion would continue in a straight line until the bird plunged into the water, but they are both capable of the most delicate adjustment, at the creature's will, and just before touching the water, a slight muscular effort may turn them so as to change the descent into a horizontal movement, which is maintained until the impetus derived from the descent is exhausted, and renewed flapping is required to raise the body to the necessary elevation for another aërial slide. Very frequently, the bird, instead of skimming horizontally over the water until his momentum is exhausted, moves his wings again, so as to direct himself upward with the remaining portion of the same impetus, and thus save himself a few flaps of the wings in ascending for a fresh start.

NOW, although it is generally agreed that to equip an air-ship with machinery for driving it upward proportioned in power to the wing-muscles of a bird would make it too heavy for practical use, it is perfectly possible to lift one, furnished with wings, by means of hydrogen to a height corresponding to that from which a gull or a hawk begins its long flight, and then, by allowing the hydrogen to escape, leave it resting, by means of its wings, on the air, just like a bird balancing itself for a downward swoop. From that point the direction, and even the speed of its movement, might be controlled, simply by setting the wings, until the structure reached the ground; and it would be perfectly possible, after its flight had brought it nearly to the earth, to raise it for a fresh start, by means of a supply of hydrogen brought in a compressed condition, just as a bird would raise itself by flapping its wings. Of course, we do not expect immediately to see balloons soaring about the sky in this manner, and the Commissioner of Patents need not lay in a store of ammunition at present under the apprehension of a visit from us, but, simply as a piece of science, there does not seem to be anything absolutely impossible in the notion, and no method of propulsion which we have ever heard suggested for navigating the air offers anything like the power which could be obtained in this way. There is a man at present exhibiting at the Northern seaside resorts, who suspends himself by a belt, furnished with hooks, to a parachute some eight or ten feet in diameter, and has the parachute taken up into the air by a hot-air balloon, made out of cotton cloth. On reaching a certain height, which is advertised as two thousand feet, but which we are willing to believe a little less, he detaches the balloon by pulling a cord, and descends, sustained by the parachute, in safety to the ground. Having thus solved, like so many others, the problem of descending safely through the air from a great height, it would not be a very long step to the addition of movable wings, controlled by cords, on each side of the parachute, by which the descent might be varied in direction, without increasing the risk of accident; and it is quite conceivable that an apparatus of this sort, cheap and simple as it is, might be found very serviceable, particularly for military use. What might be done with it on a large scale we will not venture to predict, but as a suggestion to those who laugh at the idea of rising five miles into the air at New York, and sailing thence to Liverpool, and who cannot believe that an air-ship can ever be made capable of struggling against wind storms, it may not be amiss to say that the gradient of a course from a point five miles above New York to Liverpool would be a descent of nearly ten feet in a mile, which is enough to give a tolerably rapid movement in such a medium as air; while, in regard to the speed attainable, it should be remembered that if a little bird, weighing two ounces or so, with nothing but its weight and its wings to depend upon, can outstrip the fiercest hurricane, it is not beyond possibility that a structure weighing a million times as much might be so navigated as to pass through the currents of the air as easily as a steamship does through those of the sea.

SOME of our readers will remember that Mr. Norman Shaw is a good deal of a connoisseur in matters of plumbing, and published long ago some remarks on rain-water and soil pipes which were of value. Recently he has turned his attention to the study of drain-pipes, and, not being satisfied with drains as at present laid, has invented a new form. The defect of the ordinary drain-pipes of cylindrical section, with socket-joints, consists, as he says, in the difficulty of laying them in straight lines, and the impossibility of ascertaining whether they are properly jointed or not. In fact, it is very difficult to make a good cement joint with cylindrical tubes, as the cement usually either fails to fill the joint, or, if the joint is filled, the cement projects into the pipe, forming an obstruction which is seldom removed at the right time, if at all, and in either case collects lint and sediment, and leads in time to the complete choking of the pipe, when it is necessary to break up several lengths of pipe, in order to get out the offending one, and replace it with another. To meet these objections, Mr. Shaw has had made for him drains shaped in section like the letter U, or, rather, with the oval profile which is recognized as best for large sewers, but with the top open, a groove or rebate being formed in each edge. The heading-joints have "hubs," or sockets, like those of the cylindrical pipe, but open at the top. To use this drain, the lengths are laid in the trench, and jointed with cement, and, the top being open, it is easy for the workman to rub the joints smooth as the pipes are laid, and for the architect to see whether the trough made by the section of drain is perfectly smooth and straight, before it is covered over. The cover used is simply a series of flat earthenware plates, which fit into the sockets or rebates on the edges, and, after being set in place, are plastered with half an inch or so of cement. The small radius of the invert helps to keep the drain clean, and, if any stoppage takes place, the flat tile cover is easily removed where necessary. So far, Mr. Shaw has used only drains of earthenware made in this way, but he has had some sections made of artificial stone, of Portland cement, sand and small pebbles, and, although he has not yet brought these into actual use, he finds the appearance of them "most fascinating," and hopes for the best results.

WE grieve to hear that the imported laborer who works in the Divine vineyard as rector of the Church of the Holy Trinity, in New York, has been adjudged to hold his position in contravention of the laws of the United States, and the corporation of the church has been condemned to pay a fine of one thousand dollars for inviting him to this country. The case has been appealed to the Supreme Court of the United States, and, in making the appeal, the counsel for the defence has added to his plea the extraordinary claim that the Contract Labor Law, under which the conviction was obtained, is unconstitutional, so far as it applies to importing clergymen, on the ground that it restricts that free exercise of religion which is granted by the Constitution to every man. We shall be curious to see what the Supreme Court will say to this idea, under which, as it seems to us, a congregation might lay claim to the spiritual ministrations of any other violator of a statute, whether in or out of jail, and complain that it was balked of its "free exercise of religion," if he was not immediately released to them. The District Attorney, Mr. Walker, who has a sharp eye for absurdities, and considerable courage in expressing his opinion about them, endeavored to avoid confusing the case with this doctrine, but was obliged to yield. Meanwhile, as the case will probably not be reached in the Supreme Court for two years or more, Mr. Warren is likely to go on with his duties, unless a new complainant should appear.

ARCHITECT, OWNER AND BUILDER BEFORE THE LAW.[1] — IV.

WHAT is the sort of employment constituted by the acceptance of terms of competition publicly offered is less understood by all parties than it should be. In the first place, it ought to be remembered that whatever contract is entered into between the promoters of a competition and those who agree to their terms is binding on both. Although a promise to do work for nothing is not a contract, and performance of the promise cannot be required, a promise to do work for an inadequate or even a contingent remuneration is valid, and can be enforced. Thus the chance of securing employment, such as forms the inducement held out in competitions, may, if it is clearly offered, form a valid consideration for a promise to submit a design, and an architect who promises to do so in accordance with the terms of competition offered is bound by his part of the contract, and cannot subsequently decline or neglect to send his drawings, except with the consent of the party to whom the promise was made.

On the other hand, the party inviting competitive designs is bound strictly by the terms of the invitation. It is well settled that "an offer of reward or compensation by public advertisement, either to a particular person or to a class of persons or to any or all persons, is a conditional promise, and if any one to whom such offer is made shall perform the service before the offer is revoked, such performance is a good consideration and the offer becomes a legal and binding contract," and it has been decided that the contract thus made is to be regarded as a written one, and therefore not subject to the operation of the Statutes of Fraud or Limitations. If no one should accept the terms offered, by doing the work in accordance with them, the promise contained in them will be still only conditional, and the offer, so long as it remains conditional, may be revoked, but as soon as any one does the service specified in the invitation, he has established his right to compel the persons who issued it to fulfil their part of the contract. There are many cases involving this point, but nearly all of them refer to services rendered in response to public advertisement by finders of lost property, or persons engaged in capturing thieves or reclaiming stolen goods.[2]

Where, as in these instances, the finder of a lost article or the captor of a criminal is compelled to sue for the reward promised by advertisement, he is always successful, provided he has complied with the advertised terms, and it has even been held that a person who found anything lost, for which a reward had been advertised, and who, on offering to restore it to the owner, was refused the promised reward, might lawfully keep the article himself.

Unfortunately, the advertised "invitations to architects" to make designs in competition sometimes expressly stipulate that the architects who accept them shall abandon all claim to fair treatment, as, for instance, a recent one, in which the promoters "promised nothing, but would be governed by what seemed to them for the best interest" of the corporation which they represented; or make promises too vague to be enforced; but where the promise is definite, it will certainly be enforced in favor of those who comply with the conditions which accompany the promise. The most noted case of the kind which has yet been decided, and one of very great importance to architects, is that of Walsh *v.* St. Louis Exposition and Music Hall Association, 16 Missouri Appeals Reports, 502, and 9 Missouri (Supreme Court) 459. This suit grew out of a competition instituted by the St. Louis Exposition and Music-Hall Association, which issued an invitation in the following terms:

"ST. LOUIS, April 19, 1883.

"DEAR SIR, — At a meeting of the Board of Directors of the St. Louis Exposition and Music-Hall Association, held on the 18th day of April, 1883, the following resolutions were adopted:

"*First.* That all architects, residents of this city, and five non-residents, be invited to prepare and submit designs.

"*Second.* That from those presented by residents, seven, which shall be considered the most meritorious, shall be accepted and awarded five hundred dollars ($500) each, and the five presented by non-residents shall each be awarded the same amount. All designs for which are paid five hundred dollars ($500) shall be the property of the Association.

"*Third.* That it should be understood that any foreign architect may submit a design, but if not accepted as the most meritorious of all, he will receive no compensation and his designs shall be returned.

"*Fourth.* The architect who is successful shall not receive five hundred dollars, but he shall be engaged as architect and superintendent and shall be paid for performing such duties the usual commissions as adopted by the American Institute and the St. Louis Institute of Architects.

"*Fifth.* That all architects entering for competition shall so notify the president or secretary on or before May 5, 1883.

"*Sixth.* That said plans and specifications shall be placed under seal in hands of the secretary on or before July 2, 1883, and that they shall be without names or marks to indicate by whom made.

"*Seventh.* That there shall be ground plans of the several floors, drawn to a scale of one-sixteenth of an inch to the foot, and elevations and cross and longitudinal sections, drawn to a scale of one-eighth of an inch to the foot, with descriptive specifications. Elevations to be geometrical and in line simply. No perspective drawings will be admitted. All plans must be simply tinted in India ink. No shaded drawings will be admitted.

"*Eighth.* The said designs and specifications shall be for a building to cost not over four hundred thousand dollars ($400,000) exclusive of power, electricity and elevator machinery, arrangements for which, however, must be made.

"*Ninth.* As to the building itself and what architects should be requested to include in their plans, we recommend the following features:

"*First.* That building shall not cover more than 480 x 320 feet.

"*Second.* A music-hall, with seats 20 x 30 inches, to seat four thousand people, and arranged so that it can be used for balls, exhibits or dramatic purposes. That the stage shall be large enough to accommodate an organ and seat one thousand persons. The hall to be well lighted, ventilated and with perfect acoustics.

"*Third.* A small hall to seat one thousand two hundred persons, with suitable stage.

"*Fourth.* A basement under building, to be arranged for machinery, carriages and other heavy exhibits, and for power-shafting.

"*Fifth.* Fine art rooms for display of pictures and statuary.

"*Sixth.* Floral hall that will provide for rockery and water displays.

"*Seventh.* General exhibit-hall for all articles.

"*Eighth.* Dressing-rooms, closets, etc., for public use.

"*Ninth.* Boiler-rooms, coal-sheds, etc., away from building.

[1] Continued from page 267, No. 650.

[2] Ryer *v.* Stockwell, 14 Cal. 134; Symmes *v.* Frazier, 6 Mass. 344; Loring *v.* City of Boston, 7 Met. 411; Wentworth *v.* Day, 3 Met. 352; Gilmore *v.* Lewis, 12 Ohio 281; England *v.* Davidson, 11 A. & E. 856; Lancaster *v.* Walsh, 4 M. & W. 16; Williams *v.* Cowardine, 4 B. & Al. 621; Hunt *v.* City of Utica, 18 N. Y. 442.

"*Tenth.* Arrangements for elevators to high parts of building."

This invitation was sent to Mr. Thomas Walsh, of St. Louis, who notified the officers of the Association of his intention to submit plans in accordance with it, and prepared and sent in accordingly two designs in compliance with the requirements. One of these designs was, as he afterwards learned, decided to be the best submitted, and was retained as the property of the Association, but another person was appointed architect of the building, and work was commenced. Mr. Walsh then presented a claim to the appointment, and informed the officers of the Association that he was willing and ready to undertake the work of architect and superintendent of the building. On their refusal to transfer the commission to him, he brought a suit for damages, which, under the usual rule, that the measure of damages for the refusal of one party to fulfil a contract is the profit which the other party would have derived from its complete execution, he laid at twenty thousand dollars, or five per cent on the estimated cost.

The Music-Hall Association did not deny that Mr. Walsh's design was placed first, but resisted his claim on the ground that nothing in its proposal implied an unconditional obligation to employ as architect or superintendent the person whose design might be found the most meritorious or acceptable of those submitted, and no such promise being intended or made, Mr. Walsh had no ground of action. The Circuit Court, in which the case was first tried, sustained this view, and gave judgment for the defendant. Mr. Walsh then took the case to the Court of Appeals, which reversed the finding of the court below, and ordered a verdict for the plaintiff. Another appeal was then taken by the opposite side to the Supreme Court, which fully affirmed the decision of the Court of Appeals, and probably established the law on the subject in this country.

The stipulation on which Mr. Walsh relied for proving the conditional promise, of which he, having fulfilled the conditions, was entitled to the benefit, was the fourth, which read: "The architect who is successful shall not receive five hundred dollars, but he shall be engaged as architect and superintendent, and shall be paid for performing such duties the usual commissions as adopted by the American Institute and the St. Louis Institute of Architects." The Association explained this by saying that the expression "the architect who is successful" was not intended to mean necessarily the person who submitted the best plans, as this might be some one unfit to be trusted with the responsibility of execution, but that it meant the architect who should, on the whole, be considered worthy of the appointment.

It is surprising that such transparent sophistry should have imposed upon the Circuit Court, but it did not for an instant blind the keener eyes of the judges of the Court of Appeals, who say, in their opinion, that "the whole tenor of the proposal demonstrates that no such application of the words was thought of in the framing." "Who is the person intended by the expression, 'the architect who is successful?'" they asked. Twelve architects are promised a reward of five hundred dollars each. It is obvious that to be one of these is not to be the "successful" person, for the five non-resident architects receive their five hundred dollars without any regard to the quality of their work, and the whole tenor of the circular shows that it is intended to stimulate the powers of competitors by promising something to the one person who shall surpass all the others in doing the work which the invitation specifies. This one, clearly, is the "successful" competitor meant by the circular, and "if the plaintiff, as he avers, did prepare and hand-in designs, plans, elevations, sections and specifications which were, upon examination and consideration by the defendant and its Board of Directors, considered and declared as the most meritorious of all those that had been submitted to it under said proposal, and the same were accepted by said defendant as such he thus became the successful architect to whom the fourth clause of the proposal distinctly promises the superintendency."

[To be continued.]

Accident to Seville Cathedral.—A pier of the Cathedral at Seville failed August 2d, causing a portion of the roof of the nave to collapse. The falling débris destroyed the organ and did other damage to the cathedral. It is said that not less than $500,000 will be needed for the repairs, part of which sum will be raised by a national subscription.

BUILDERS' HARDWARE.[1]—III.

NAILS.

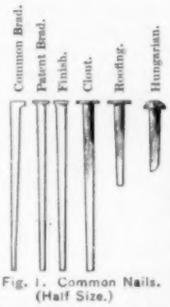


Fig. 1. Common Nails. (Half Size.)

THE nails commonly used in connection with building operations are too well-known to require any description. They are specifically designated as plate-nails. Up to within a comparatively short time, nails were made by hand almost entirely by women and children, and it is one of the best arguments in favor of the introduction of machinery that the process by which nail-making has been perfected has released a vast multitude from the laborious and wearing occupation, besides giving a great deal better results. The application of machinery to the manufacture of nails is purely an American idea and so recent have been the innovations in connection with this industry that we imagine many people would be surprised to know the changes which have been made both in the form and in the character of the ordinary nails, during the past generation. It is only about fifteen years since iron nails were annealed, or capable of clinching without rupture.

In the manufacture of nails the iron is first rolled into plates having a thickness equal to the desired thickness of the nail and a width a little greater than the length of a finished nail. The plates are cut so that the length is at right angles to the grain, the idea being that when the nails are cut out the fibre will run lengthwise the nail and thus make up much stronger. Special machinery cuts the nails out in alternate wedge-shaped slices so that the metal is used without any loss. The wedges are picked up, held in a vise, the heads stamped on them, and the finished nails finally dropped out into the casks. The machinery is too complicated to allow of any description here, but the process is very simple and easily understood. Nearly all the common nails are made from plates. Hand nails are still made for special uses such as for horse-shoeing, but the cost is too great and hand-made nails are really no better than those which are made by machinery.

Nails are designated according to their length by pennies. The origin of the designation is generally assumed to be in the old system of weights, the nails being made with as many pennyweights of metal as the number indicates. This designation, of course, no longer holds good, as nails have changed materially both in size and weight, but it is still retained for common convenience and we believe the gradation is uniform with the various manufacturers. The weights run from two to seventy penny and the nails vary in length from one inch to six inches. Six-inch nails and larger are more properly designated as spikes, though the trade recognizes a special form of nail of somewhat stouter proportions, made in several of the larger lengths and technically sold under the name of spikes.

Trautwine's "*Pocket-Book*," page 425, gives the sizes, etc., of nails as follows.

Name.	Length, inches.	No. to pound.
3d	1¼	557
4d	1½	336
5d	1¾	210
6d	2	163
7d	2¼	123
8d	2½	93
10d	3	66
12d	3¼	50
20d	4	32
30d	4½	19
40d	5	16
50d	5½	13

Common nails are now very largely made of a low grade of steel, the cost being not over ten cents per hundred pounds more than in wrought-iron.

In regard to the strength of nails, Trautwine also states that boards of oak or pine nailed together by four to sixteen tenpenny common cut-nails and then pulled apart in a direction lengthwise of the boards and across the nails, tending to break the latter in two by a shearing action, averaged from three hundred to four hundred pounds per nail to separate them as the result of many trials. "*Johnson's Encyclopædia*" states that the rough surface of a cut-nail adds about twenty per cent to its holding power. The absolute resistance nails will offer to withdrawal varies so widely with circumstances, that no satisfactory results are available.

[1] Continued from No. 659, page 63.

The sizes of nails used for specific purposes is largely a matter of judgment on the part of the builder, but the common custom is to use four-penny nails for shingling and slating, six-penny for clapboarding, sixes and eights for finish, eights and nines for flooring, nines and tens for boarding and forty-penny and upwards for framing. Architects sometimes consider it well to specify the sizes of nails to be used for bridging the floor-beams, and for slating, but on general principles we would suppose that a builder who would need any such restrictions would not be a man to employ under any circumstances.

Nails are commonly sold by the cask of one hundred pounds. The following are the net prices in the Boston Market.

PRICES FOR CUT-STEEL NAILS, JUNE 20, 1888.

COMMON, FENCE AND SHEATHING.	per keg.
50d — 60d — 70d	$2 50
12d — 20d — 30d — 40d	2 25
10d	2 35
8d and 9d	2 50
6d and 7d	2 65
4d and 5d	2 85
4d lt. and 3d	3 25
3d fine	3 75

BOX.	per keg.
12d and larger	$2 75
10d	2 85
8d and 9d	3 00
6d and 7d	3 15
5d	3 35
4d	3 35
3d	3 75

FLOORING.	per keg.
12d and larger	$2 75
10d	2 85
8d and 9d	3 00
6d and 7d	3 15

FINE FINISHING.	per keg.
12d and larger	$3 15
10d	3 25
8d	3 40
6d	3 55
5d	3 75
4d	3 75
2d	3 75
2d fine	4 20

SLATING.	per keg.
6d and 7d	$2 90
4d and 5d	3 10
3d	3 50

SPIKES, of all sizes $2 50

Common nails can be had galvanized in all the ordinary sizes. Galvanized nails cost 2½ cents per pound extra.

Canada wrought nails are sold for $16.00 per cask. Clinch nails (annealed) cost from $3.10 per cask for ten-penny, to $4.50 for two-penny. Swedes-iron nails are made from an extra quality of wrought-iron, and are especially used for slating, as they are supposed to stand the weather better than ordinary plate-nails. When made from genuine Swedish iron, four-penny nails are sold at $5.50 per cask. American-iron Swedes are $3.85 per cask. Architects usually find it advisable to specify tinned Swedes-iron nails for roofing-work. Tinning adds from twenty to fifty per cent to the cost, depending on the number of nails to the pound.

Finishing-nails are lighter and thinner than common plate-nails, and besides being made quite smooth, they have very slight heads, to permit of being easily countersunk in the wooden finish. They are made in a number of sizes, from ⅜ to 2½ inches in length. Next to finishing-nails are the common brads, made with a head in the form of a shank on one side. The sizes are from ¼ inch to 2 inches in length. Brads are used for small finish, tacking on panel mouldings, etc., the metal being quite thin and the brad driven edgewise of the grain so as not to split the wood. Swedes-iron patent brads are manufactured by the Stanley Works, and sold at from 18 cents to $1.25 per pound, with a discount. Common brads are listed at the same prices. Clout nails are made with broad, flat heads, and are sold in sizes varying from ⅜ inch to 2½ inches in length and costing from 48 to 13 cents per pound, with a discount. They are used about a building chiefly for tacking gutters, etc. Hungarian nails are a species of large, rounded-headed tacks. They are made from ⅜ inch to 1½ inch long, and average 60 cents per pound, with a discount. Figure 1 illustrates the various special forms of common nails.

All of the foregoing may be classed as common or plate nails. Nails of a very different kind, manufactured from steel wire, have been in use for a number of years in America and for a longer period in Europe, and in both places they have been very favorably received and are fast superseding the common cut-nails for many purposes. The advantages of these over the common nails are many. For the same amount of metal they are much stronger; they can be driven into very thin boards without splitting them, and can be removed without leaving so unsightly a hole as is usually made by the common nails. Besides this, on account of their superior stiffness they can be driven into very hard wood, where much caution is necessary if common nails are to be used. They are also more easily produced and are handled with less labor. They are manufactured by a simple machine which is automatic in its action, a coil of the wire adjusted to it being cut off in even lengths, headed, pointed and, if necessary, ribbed according to the kind of nail which is desired. The same sizes prevail for these as for the ordinary plate-nails. The following table gives the lengths and number to the pound as listed by the Salem Nail Company, also the net retail prices per hundred pounds in the Boston market.

TABLE OF BEST QUALITY OF STANDARD STEEL-WIRE NAILS.

Size.	Length.	Number of Nails to One Pound.	Price per Keg.
2d Common.	1 in.	1200	$5.00
3d "	1¼ "	720	5.00
4d "	1½ "	432	4.00
5d "	1¾ "	300	4.00
6d "	2 "	252	3.70
7d "	2¼ "	186	3.70
8d "	2½ "	132	3.35
9d "	2¾ "	105	3.35
10d "	3 "	87	3.15
12d "	3¼ "	66	3.00
16d "	3½ "	51	3.00
20d "	4 "	35	3.00
30d "	4½ "	27	3.00
40d "	5 "	21	3.00
50d "	5½ "	15	3.35
60d "	6 "	12	3.35

Other manufacturers occasionally classify the nails in a more natural way by lengths and numbers. The American Screw Company of Providence, R. I., manufactures a very extended line of these nails and sells them in lengths varying from three-sixteenths inch to twelve inches in length, with a thickness of wire varying from No. 22 to No. 0 wire-guage. The prices are by the pound. Everything above two inches, No. 9 wire, is sold at five cents per pound. For smaller sizes the prices increase up to fifty cents per pound for 3-16 of an inch, No. 22. For nails with special heads or special points add one cent per pound. For nails combining all these specialties add one cent per pound for each specialty. For tinning add fifty per cent.

Besides the common wire nails the Salem Company makes a variety of patterns such as fence, clinch, smooth, box, casing, finishing, common brads, flooring, slating, shingle, fine nails, and wire spikes. The wire spikes are made in sizes from three to nine inches long averaging from fifty to four and a half nails per pound. Figure 2 shows the shapes of the different nails. Besides these there are several other special makes not relating to builders' hardware. The variety of nails manufactured from wire is very extensive, and the nails are deservedly popu-

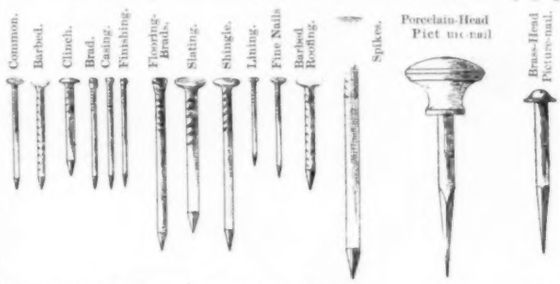


Fig. 2. Wire Nails. (Half Size.) Salem Nail Co. Fig. 3. Fig. 4.

lar. They do not hold quite as strongly against pulling out as the common cut-nails but in every other respect they are, on the whole, rather superior.

There are several kinds of ornamental nails manufactured for special purposes. Figure 3 shows the common porcelain-headed picture-nail. P. &. F. Corbin manufacture nails of this description from two and one-half to four inches in length at prices from $3.88 to $6.50 per gross. Brass-headed nails, Figure 4, are manufactured by the same firm in nine sizes, from one

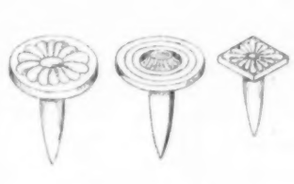


Fig. 5. Brass Door-Nails. (Half Size.) J. B. Shannon & Sons.

Fig. 6. Clinch Staples.

inch to four inches in length and from $1.05 to $4.00 per gross. These prices are with a discount.

There are also a few styles of ornamental door nails manufactured. J. B. Shannon & Sons show three varieties in

their catalogue, Figure 5. These are made in iron and bronze, at 50 to 72 cents per dozen, or in brass at 90 cents to $1.25 per dozen, list price.

In connection with nails may be mentioned the common staples such as are used for blind slats, etc. These are sold in various sizes, from three-eighths of an inch to one and one-fourth inch in length, costing from forty-four to twenty-eight cents per pound. The Florence Tack Company, as well as several other manufacturers, carries a line of steel and iron clinch staples such as are shown by Figure 6. These are made in a number of sizes from five-eighths of an inch up, and cost from thirty cents a hundred and down.

TACKS.

Tacks are of comparatively little value to the builder, being used more especially for carpets, furniture, saddlery and the like. The various lengths of common tacks are designated by ounces, the size of the tack indicating the number of ounces put in a paper when packed full weight.[1] The lengths are always essentially the same with the different manufacturers, for the same weights. Tacks are cut by much the same kind of machinery as is used in the manufacture of plate nails. Steel, American-iron, Swedes-iron and copper are used for tacks. Iron is sometimes galvanized and occasionally nickel-plated or tinned. Figure 7 illustrates the relative sizes of tacks manufactured by the Stanley Works, and the following table gives the list prices of the same company.

TABLE OF TACKS (STANLEY WORKS).

Size.		American-iron.			Swedes-iron.			Copper.		
		Price per doz.		Price per lb.	Price per doz.		Price per lb.	Price per doz.		Price per lb.
Ounce.	Inch.	Full weight.	Half weight.	Pound boxes, or bulk.	Full weight.	Half weight.	Pound boxes, or bulk.	Full weight.	Half weight.	Pound and half-pound boxes, or bulk.
½	½	....	....	....	$0 60	$0 30	$1 60	$1 12	$0 56	$3 00
¾	⅝	....	....	....	70	35	1 25	1 12	56	2 00
1	¾	$0 80	$0 40	$1 00	80	40	1 00	1 12	56	1 50
1½	⅞	90	45	80	90	45	80	1 30	65	1 15
2	1	90	45	63	1 00	50	66	1 40	70	95
2½	1⅛	1 00	50	55	1 10	55	58	1 60	80	85
3	1⅛	1 10	55	50	1 20	60	52	1 80	90	80
4	1¼	1 20	60	44	1 40	70	46	2 00	1 00	66
6	1⅜	1 30	65	34	1 60	80	36	2 52	1 26	56
8	1½	1 50	75	30	1 90	95	32	3 36	1 68	56
10	1⅝	1 60	80	28	2 20	1 10	30	4 20	2 10	56
12	1¾	1 80	90	26	2 50	1 25	28	5 04	2 52	56
14	1⅞	2 00	1 00	24	2 80	1 40	26	5 88	2 94	56
16	1⅞	2 20	1 10	23	3 00	1 50	25	6 72	3 36	56
18	2	2 40	1 20	22½	3 30	1 65	24½	7 56	3 78	56
20	2⅛	2 60	1 30	22	3 60	1 80	24	8 40	4 20	56
22	1	2 80	1 40	21	3 80	1 90	23	9 24	4 62	56
24	1¼	3 00	1 50	20	4 00	2 00	22	10 08	5 04	56

Tinned tacks can be had in iron or copper, in all the above sizes, at an advance of from twenty to thirty per cent.

Double-pointed tacks have, within a few years been made from flat steel wire. Five sizes are made by the Florence Tack Company, from seven-sixteenths to three-fourths inches long, varying from $1.20 to $1.80 per dozen boxes. They can be had plated, tinned or in copper. The advantage of these tacks is that they hold more tightly in the wood and at the same time are more easily removed without breaking off in the hole.

Fig. 7. American-Iron Cut Tacks, (Half Size.) Stanley Works.

[To be continued.]

[1] This statement is made in the catalogue of the Florence Tack Co.

EQUESTRIAN MONUMENTS.—III.[2]

THE HORSES OF MONTE CAVALLO.

"When we drive out from the cloud of steam, majestical white horses,
Are we greater than the first men who led black ones by the mane?"
MRS. BROWNING.

Horse-tamer at Stuttgart, Germany. Hofer, Sculptor.

A FAMOUS group of antiques which has an ancillary interest, is formed by the colossal statues and marble horses on the Piazza del Quirinale, formerly the Monte Cavallo, at Rome, the prototypes of various groups of "horse-tamers" such as the two groups at the entrance to the Champs Elysées from the Place de la Concorde, at Paris, by Coustou,[3] the more recent ones on the Pont de Jena, Paris, erected at the time of the exhibition of 1878, and the similar subjects by Hofer at Stuttgart, and those by Mandl at Salzburg, while Berlin possesses other interpretations to which have been given the political nicknames "Gehemmter Fortschritt"—progress checked and "Beforderter Rückschritt"—retrogression encouraged. The groups at Rome with the red granite obelisk, forty-eight feet high, behind them, are possibly the most widely known pieces of sculpture in the world. Those who have not seen them are familiar with the photograph which shows the rampant animals swaying out to right and left and checked by the nude and firmly-braced figures of the "tamers." Common fame credits the work to Phidias and Praxiteles, and these august names are cut upon the bases. Authority for the belief dates from the thirteenth century, for the "*Mirabilia Romæ*," at that time written, recounts the fable that these naked athletes are none other than the famous sculptors themselves, and naked in token of the clear-sightedness of philosophical science; for these famous Greeks are fabled to have come to Rome in the time of Tiberius as wandering philosophers, and taking a hint from the proposition "a penny for your thoughts"—which must have been current in those good old days—bargained for the erection of statues in their own honor provided they could disclose to the emperor his inmost thoughts: and these are the statues, a living proof of the truth of the tale and their vaticinatory success. One cannot but believe that the mists of the Dark Ages, which still surrounded the learned compiler of the "*Mirabilia*," must have befogged his understanding, for the legend makes the statutes to be works erected to the honor of and not executed by the hands of the most famous of ancient sculptors.

The Horse of Praxiteles, on the Monte Cavallo, Rome, after a print anterior to 1546.

The Horse of Praxiteles, after a sketch by Leonardo da Vinci, showing its condition at the end of the XV century.

More commonly they are known as the Dioscuri, the twin gods Castor and Pollux, whose divine aid won for the Romans the battle of Lake Regillus, and who after the battle rode slowly into Rome to tell the news, and having watered their horses headed toward the

[2] Continued from No. 659, page 61.

[3] GUILLAUME COUSTOU, the sculptor of these horses, was born at Lyons in 1678. He studied under Coysevox and won the grand prize of the Academy and went to Rome. Returning to Paris, he was received into the Royal Academy and gained much reputation by his works. His principal works are marble groups of Daphne and Hippomenes and Ocean and the Mediterranean for the gardens at Marly; marble statues of Louis XIV and Cardinal Dubois; a bronze statue of the Rhone at Lyons; bas-reliefs of "Christ with the Doctors"; "St. Louis de Gonzague" and "Hercules on the Funeral Pile," and an equestrian bas-relief of Louis XIV, on the Invalides. He died in 1746. His brother Nicolas and his son Guillaume were both noted sculptors.

Temple of Vesta and suddenly disappeared. Macaulay, who has a deeper knowledge than most how to make an historical incident immortal, records that:

"—On rode the strange horsemen
With slow and lordly pace
And none who saw their bearing
Durst ask their name or race.
On rode they to the Forum,
While laurel-boughs and flowers
From house-tops and from windows
Fell on their crests in showers.

When they drew nigh to Vesta
They vaulted down amain,
And washed their horses in the well
That flows by Vesta's fane.
And straight again they mounted,
And rode to Vesta's door;
Then like a blast, away they passed
And no man saw them more."

The Battle of Lake Regillus.

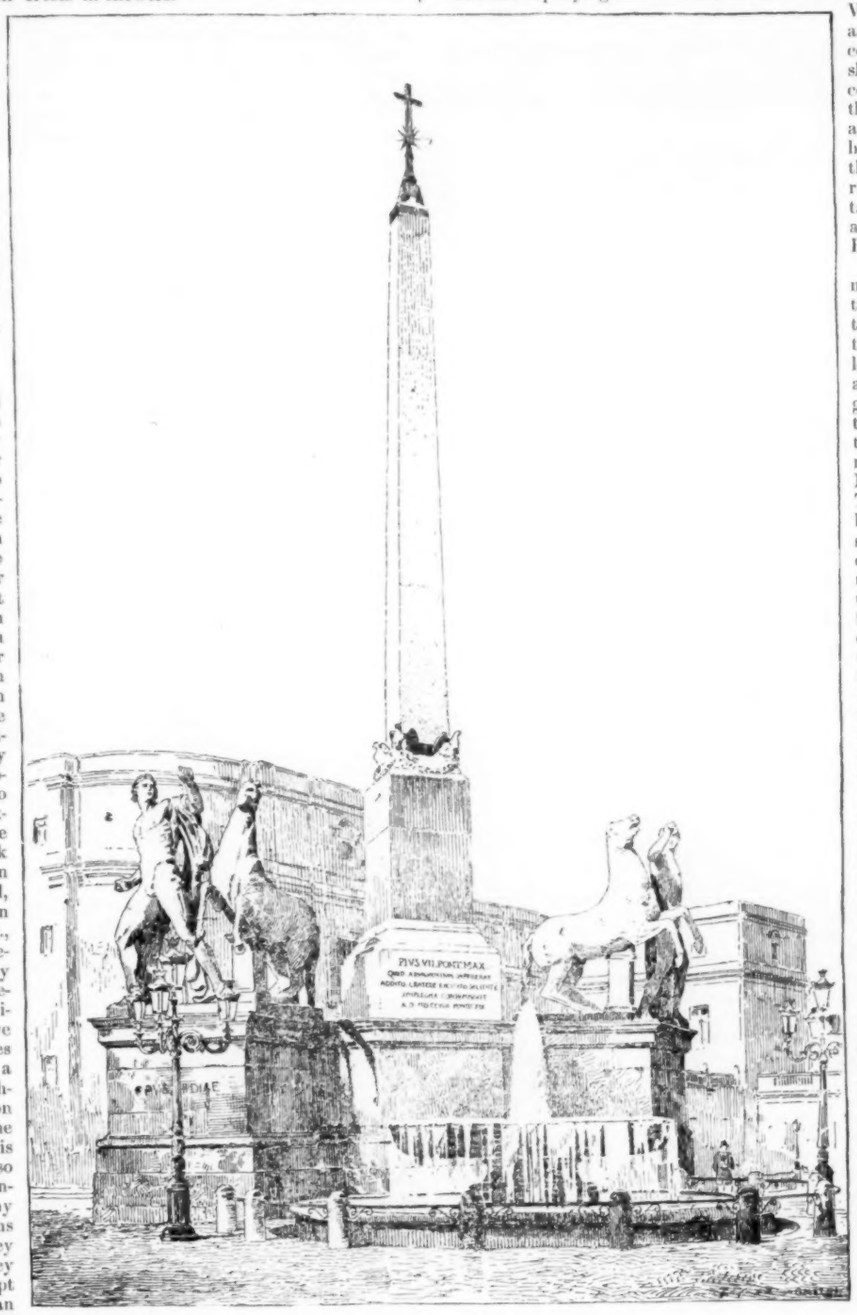
Most people will agree that it is much more likely that sooner or later sculptors should do something to immortalize the "Great Twin Brothers, who fought so well for Rome," than that they should find an inspiring theme in a bit of vulgar divination with which horses seem to have no possible connection. Whether or no posterity is right in ascribing these works to Phidias and Praxiteles, they are said to be the work of hands trained in the same school, and date between 450 and 400 B. C., and although between the time they were actually executed and the earliest record we have of them centuries elapsed, there is a chance that mouth-to-mouth tradition may have kept the record true in this case as it has in so many other instances. At any rate, no one seems to know where they came from, if they were trophies rapt from some Grecian city, and not works executed in Magna Græcia to the order of some dignitary in honor of the twin gods — or the strolling "philosophers."

That they once stood before the Baths of Constantine and were moved thence to their present position by Sextus V, is shown by the inscription, which reads:

"SEXTUS V PONT. MAX. COLOSSEA HÆC SIGNA TEMPORIS VI DEFORMATA RESTITUIT VETERIBUSQUE REPOSITIS INSCRIPTIONIBUS E PROXIMIS CONSTANTIANIS THERMIS IN QUIRINALEM ARENAM TRANSTULIT ANNO SALUTIS MDLXXXIX PONTIFICATUS QUARTO."

The horses are subordinated in scale to the gods in order to do greater homage to the divinities, and the fact that they were intended to be great works of art is shown by each being cut from a single block of marble. Certain portions left originally in the rough and evidently cut away by the restorers — for the horses in particular have been much restored, only the head and a part of the left side of the one assigned to Praxiteles being antique — show, in the opinion of Fogelberg, a Swedish sculptor, that the figures were originally sculptures in high relief and built into some structure, a supposition which is supported by the drill-holes, now filled up with marble, in the shoulder-blades of the figures which were probably made for the insertion of the metal dowels that held them in place.

The accompanying illustrations, one after a sketch by Leonardo da Vinci and the other after a sixteenth-century engraving show the mutilated condition in which the groups existed at that time. The horse here shown is the one now at the right of the spectator, and is known as the work of Praxiteles.



The Dioscuri of the Piazza del Quirinale, Rome.

Well known but not so famous are the groups of Castor and Pollux at the top of the steps leading to the Piazza del Campidoglio or Square of the Capitol, and in the immediate neighborhood of the Marcus Aurelius. These statues are believed to have stood originally either in the theatre of Balbus or in that of Pompey; but they were more or less lost to sight till, in the time of Gregory XIII, they were discovered in the Ghetto and by him removed to their present position in 1579.

The trophies on either side of them are called the trophies of Marius and were removed from niches in the pavilion (*castellum*) built at the termination of an aqueduct.

MONTE CAVALLO. — The Quirinal Palace, formerly often occupied by the popes in summer, but now the residence of the King of Italy and called the Palazzo Regio, was begun in 1574, by Flaminio Ponzio; continued under Sixtus V and Clement VIII by Fontana, and completed under Paul V by Maderna. It has been called "one of the largest and ugliest buildings extant."

THE DIOSCURI. — The Dioscuri were Castor and Pollux, sons of Jupiter and Leda and brothers of Helen. They recovered her after she had been carried off by Theseus, joined the expedition of the Argonauts, and fought with Idas and Lynceus. Castor was killed by Idas, whom Jupiter then slew with a flash of lightning. Pollux killed Lynceus and gained permission from Jupiter to join his brother, so that he lived one day among the shades of the under-world and the next among the Gods. Jupiter rewarded their brotherly love by placing them among the stars as *Gemini*, and Neptune so admired their affection for each other that he gave them power over the waves, and they were especially honored by sailors. They were also regarded as patrons of poets, presidents of public games, and inventors of the war-dance. They always rode on magnificent white horses, which were named Cyllaros and Harpagos. One of the most famous temples of the Republic was in their honor, erected out of gratitude for their assistance at the battle of Lake Regillus. On the 15th of July, the Equites visited this temple in a magnificent procession. Three superb marble columns with other fragments of this temple, still stand in the Forum.

HORSES OF MARLY. — At the entrance to the Champs Elysées are the marble

figures of horse-tamers by Coustou. They were removed in 1794 from the palace at Marly to their present position. During the siege of Paris in 1871 they were dismounted and stored for safety luckily, since during the siege and the commune shot struck the pedestals and would probably have destroyed the statues.

"I stand at the break of day
In the Champs Elysées.
The tremulous shafts of dawning
As they shoot o'er the Tuileries early,
Strike Luxor's cold gray spire,
And wild in the light of the morning
With their marble manes on fire,
Ramp the white horses of Marly." — *John Hay.*

MARLY. — The château at Marly, a favorite residence of Louis XIV a few miles from Versailles, was destroyed during the French Revolution.

[To be continued.]

THE ILLUSTRATIONS

[*Contributors are requested to send with their drawings full and adequate descriptions of the buildings, including a statement of cost.*]

THE GODDARD CHAPEL, TUFTS COLLEGE, COLLEGE HILL, MASS. MR. J. PH. RINN, ARCHITECT, BOSTON, MASS.

[Helio-chrome, issued only with the Imperial Edition.]

GOTHIC TOWERS AND SPIRES, PLATES 22, 23, AND 24. — BEVERLEY MINSTER; LITCHFIELD CATHEDRAL; AND ST. MARY'S, SAFFRON WELDEN, ENGLAND.

[Issued only with the Imperial Edition.]

COMPETITIVE DESIGN FOR A DORMITORY FOR THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA. MESSRS. COPE & STEWARDSON, ARCHITECTS, PHILADELPHIA, PA.

THE HORSES OF MARLY, NOW AT THE ENTRANCE TO THE CHAMPS ELYSÉES, PARIS, FRANCE. G. COUSTOU, SCULPTOR.

See article on "Equestrian Monuments."

CASTOR AND POLLUX OF THE CAPITOL, ROME, ITALY.

See article on "Equestrian Monuments."

CHILDREN'S WARD OF THE PRESBYTERIAN HOSPITAL, PHILADELPHIA, PA. MESSRS. JOHN MCARTHUR, JR., AND JOHN ORD, ASSOCIATED ARCHITECTS, PHILADELPHIA, PA.

CITIZEN'S BANK BUILDING, FREDERICK, MD. MR. J. A. DEMPWOLF, ARCHITECT, YORK, PA.

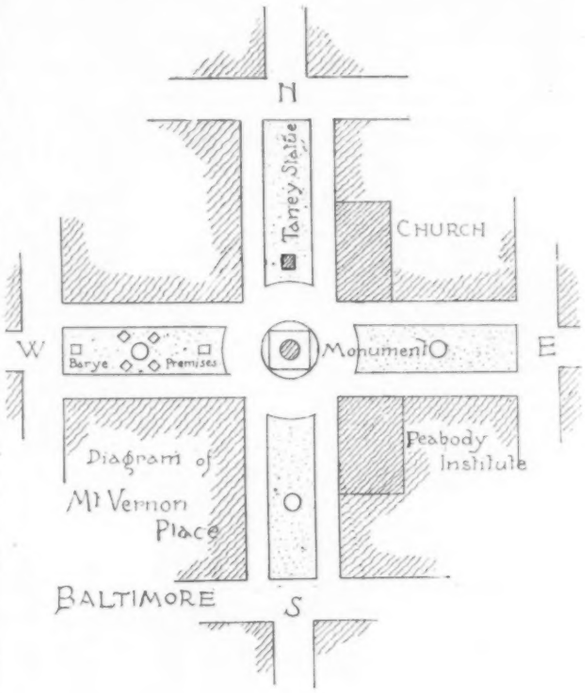
BALTIMORE

MOUNT VERNON PLACE. — WASHINGTON MONUMENT AND ITS SURROUNDINGS. — THE BARYE BRONZES. — THE GARRETT HOUSE.

MOUNT VERNON PLACE may justly be looked upon as the typical centre and nucleus of the City of Baltimore, both physically and morally, if one may use the expression in such a connection — a sort of concentrated essence of what is best in both the social and architectural spirit of the city. It is now very near the actual geographical centre, and, having for many years held undisputed sway from a fashionable and aristocratic standpoint, after passing a crisis of imminent danger of downfall, it has in the last few years under a spirit of loyal reaction been substantially redeemed, and once more, and for a long time to come, will continue to be the most prominent social centre also. From its elevated position we may look eastward over one-half of the city, and obtain a very fair idea of its general aspect. Along the broad streets in three other directions one may have a nearer view of very nearly all of the several styles of house architecture that are characteristic of the place, and while we stand there under the shadow of that column which is one of the best bits of architecture in the land, and notwithstanding the much to be regretted lost opportunities, and mistakes of treatment all about us, we are forced to acknowledge that this is by far the most effective and monumental spot in the city, and among the few such to be found anywhere in the United States.

The arrangement is perfectly simple and unstudied. In the centre is the white marble Doric column, some two hundred feet high, on its square base, all enclosed by heavy iron railings of conventional classic form about a circular space of about one hundred feet in diameter, standing at the intersection of two streets, which for the distance of one block due east, west, north and south, broaden out sufficiently to contain a rectangular central space or "parking" of grass plot and shrubbery. To the south and east the ground falls rapidly, giving an extended view bounded by the effective grouping of the great Hopkins Hospital in the distance, while to the west and north the parks are quite level.

For many years these parks were simply enclosed with a low stone curbing, surmounted by a heavy iron railing, similar to the one still surrounding the monument, whose carefully locked gates were only periodically opened for the purpose of raking up the leaves that fell from the stiff rows of trees that stood on the sidewalks, just outside the rail, or to move the very ill-kept sod, that was the only ornamentation the parks could boast of, except when at spasmodic intervals certain generous and æsthetic persons in authority would try the experiment of a few rustic bird-boxes and dwarf evergreens — which being carefully locked up to their own resources soon fell into disrepute and decay and were duly removed to make way for the next feeble inspiration in landscape-gardening. All this



was totally uninteresting and suggestively funereal enough, without doubt, but, barring the bird-box detail, it did possess the merit of repose and a certain consistency of general scheme with the surrounding buildings, broad front dwelling-houses with Classic details — good of their kind in the style of some forty years ago — and the southeast corner occupied by the low and broad white marble Peabody Institute, with its straight cornice-line surmounted by a balustrade; — all the detail of crude Roman Classic to be sure, but the general effect not inharmonious with the monument as a centre. And the final result would not have been unhappy if upon the remaining three corners there had been erected low and broad marble buildings of somewhat similar proportions, and even no better in detail. These buildings might have been applied to various desirable and appropriate uses and a decidedly stately dignity of effect would have been attained, perhaps more so than in any other grouping of our city architecture heretofore attempted.

The first loudly discordant note was struck when on one of these corners was erected in so-called Gothic, built of several different colors of green and brown stone, the Methodist Church, a building that has not failed to obtain quite laudatory newspaper commendation, but which has acquired no impressive effect from either dimensions or proportions, and whose details are only florid ornamentation with a rather frivolous spire, not too bad in itself, but which never fails to impress one with the idea of presumption in standing so near the severe dignity of the noble marble shaft.

Very soon after the erection of this building, followed in rapid succession the reconstructions of the four "parkings"; the high iron rails, uneven sidewalks, and overgrown straggling trees were removed, the last action (as to the trees) calling forth a large amount of remonstrance from the public, accompanied by sentimental reminiscences and even tears; but all such disapprobation should now be entirely dispelled by the replacing of the trees in appropriate varieties and properly spaced. So far so good, in the progress of improvement. One would think that the key-note of suggestion was so

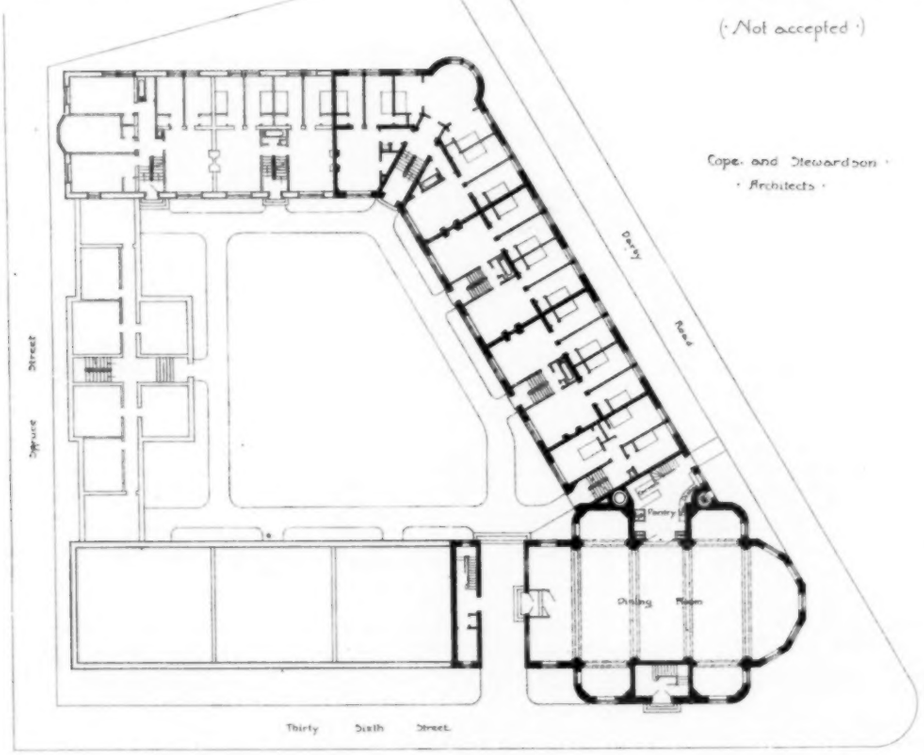
COPYRIGHT 1888 BY TICKNOR & CO

Perspective · View ·

Design for
Dormitory Buildings for
The University of Pennsylvania

(· Not accepted ·)

First · Floor · Plan ·



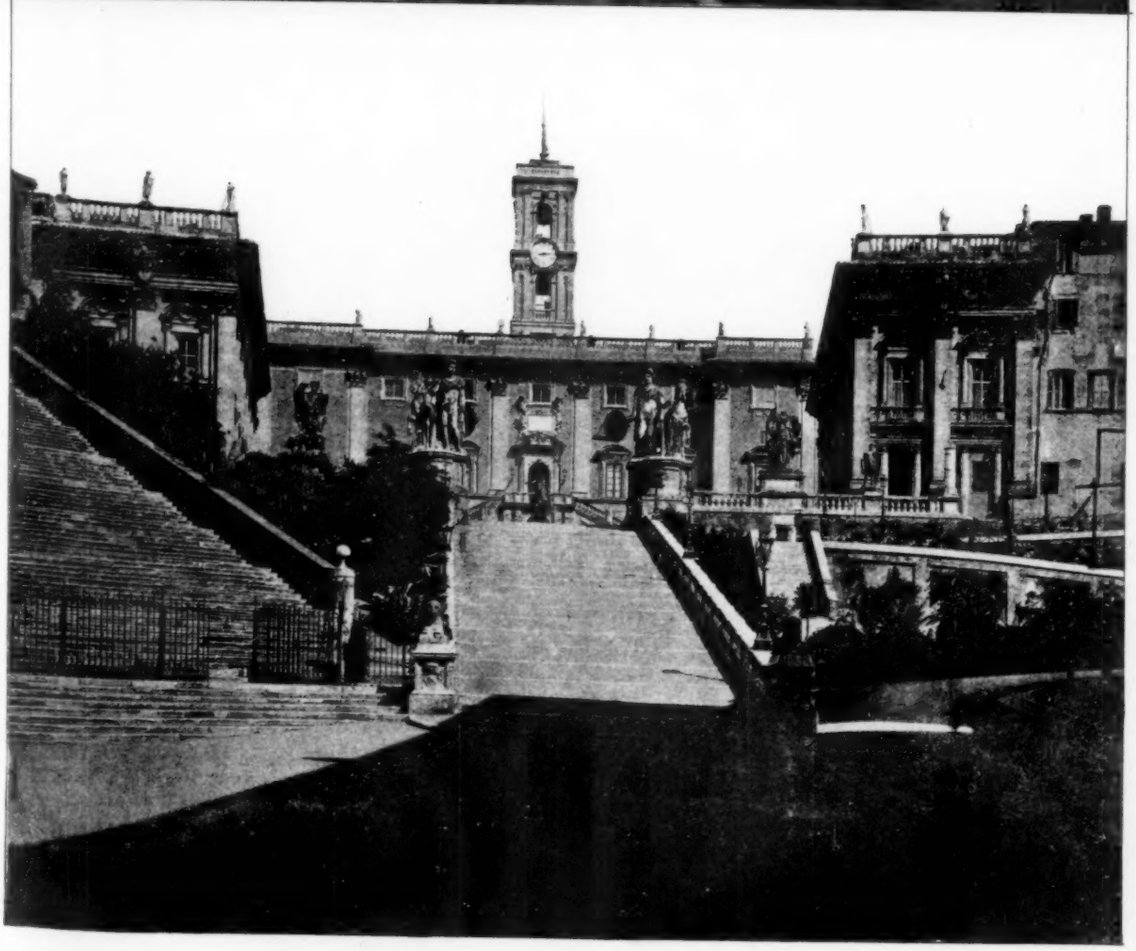
Cope and Stewardson ·
· Architects ·

COPYRIGHT 1888 BY TICKNOR & CO.

The Electric Light, Paris.
Cavelier, Sculptor.

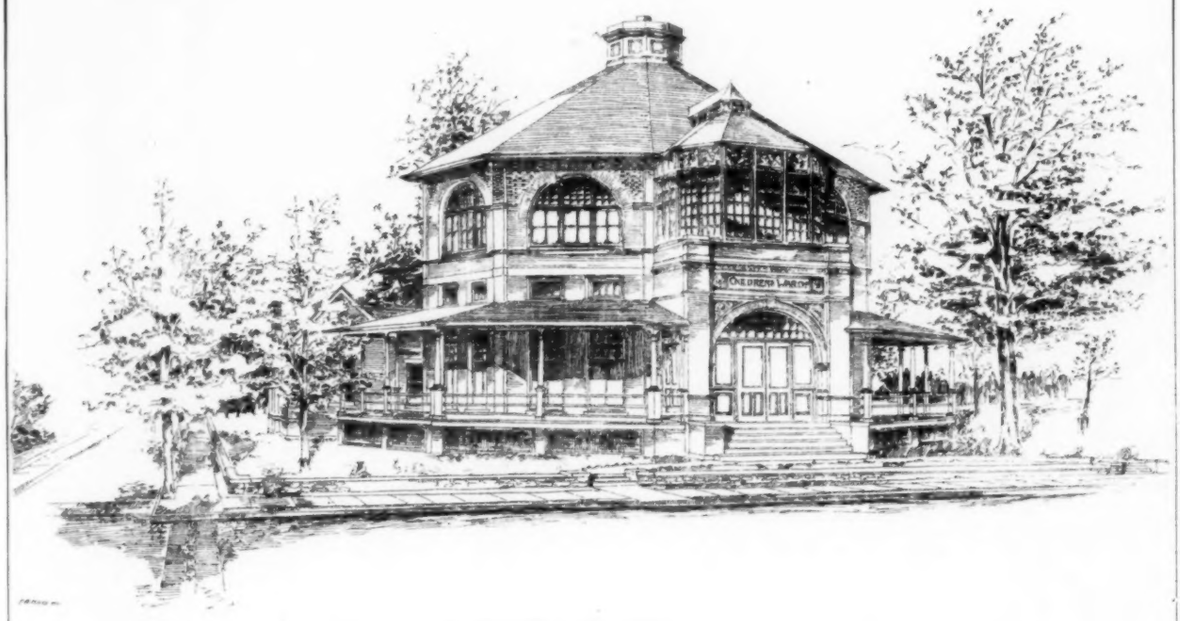
Heliotype Printing Co. Boston.

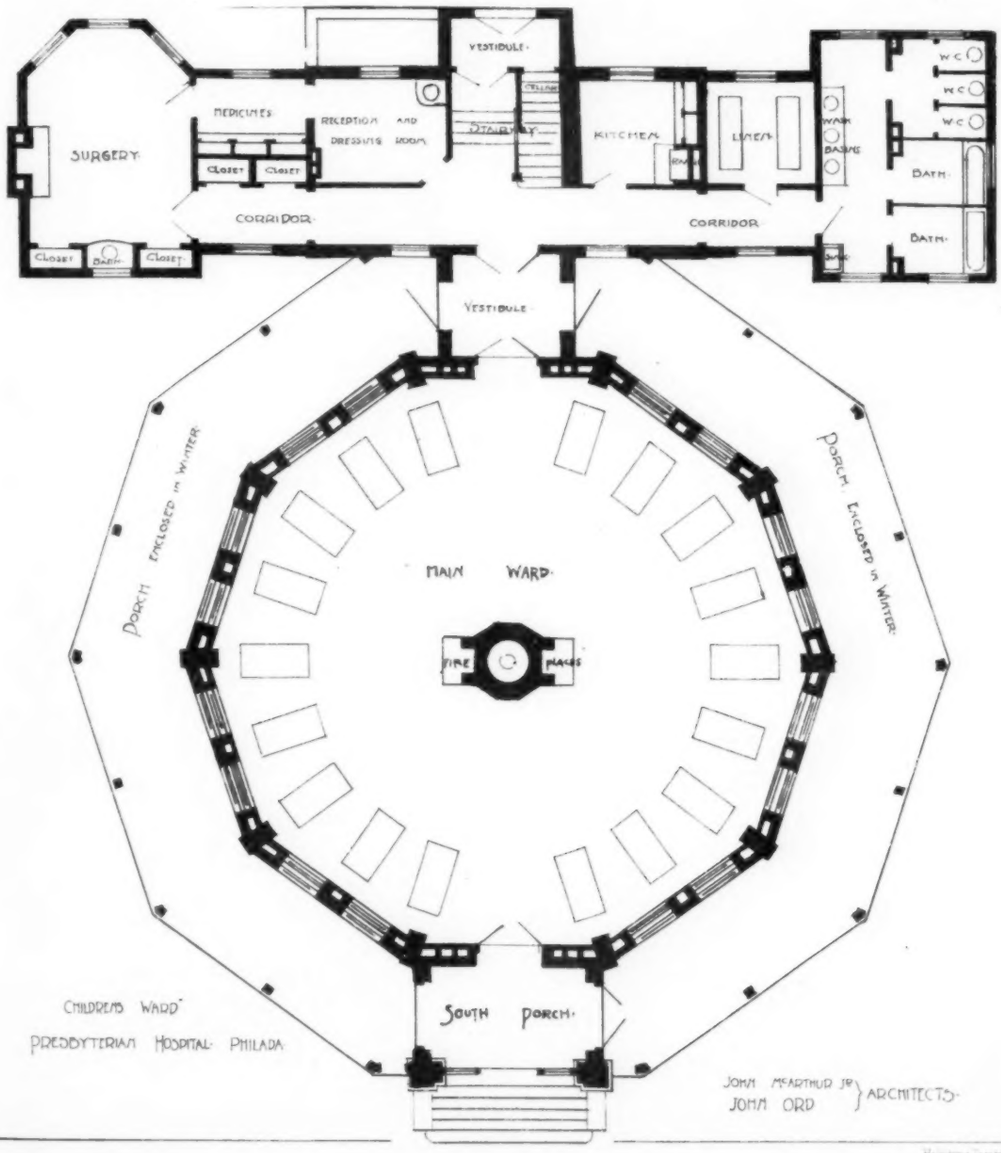
COPYRIGHT 1888 BY TICKNOR & CO



Heliotype Printing Co. Boston.

Castor and Pollux of the Capitol, Rome.



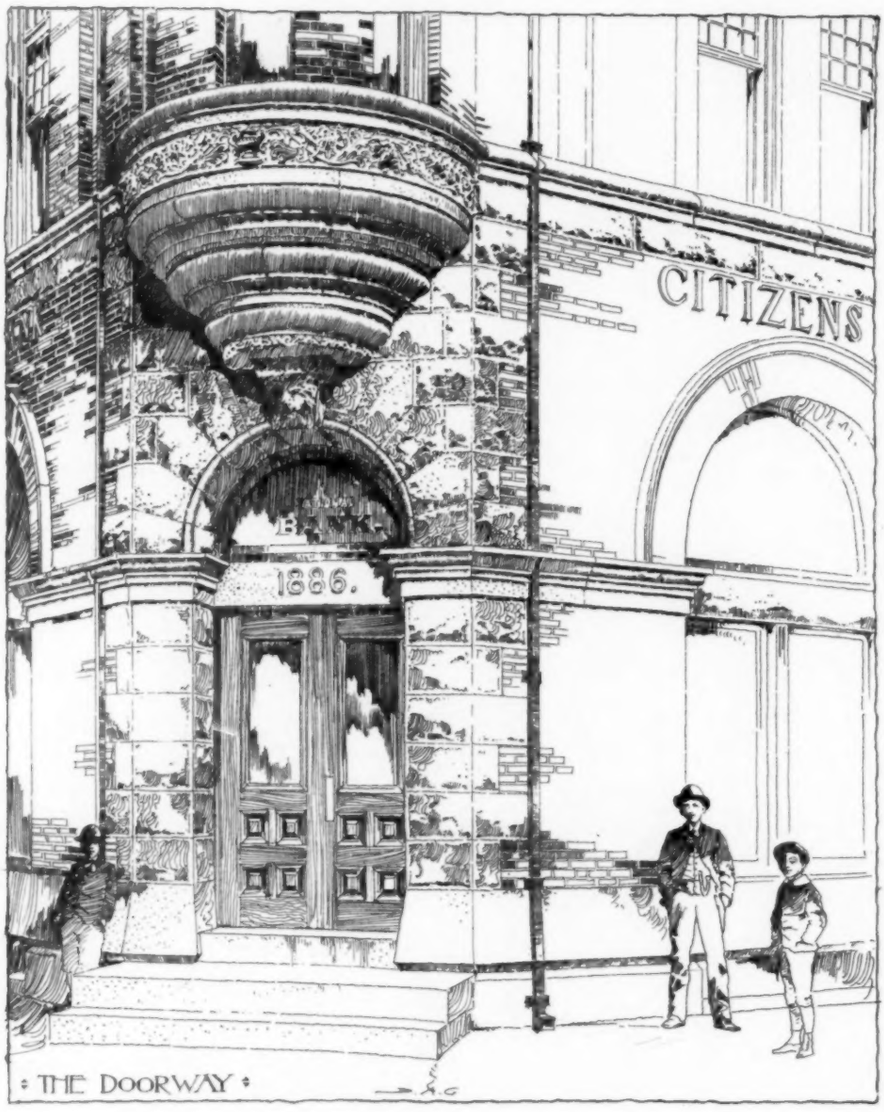


CHILDREN'S WARD
PRESBYTERIAN HOSPITAL PHILADA

JOHN McARTHUR JR
JOHN ORD
} ARCHITECTS

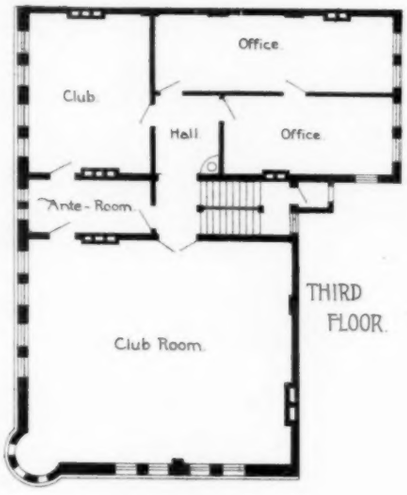
COPYRIGHT 1888 BY TICKNOR & CO

BANK, STOR
FOR THE C
Frederick, M



THE DOORWAY

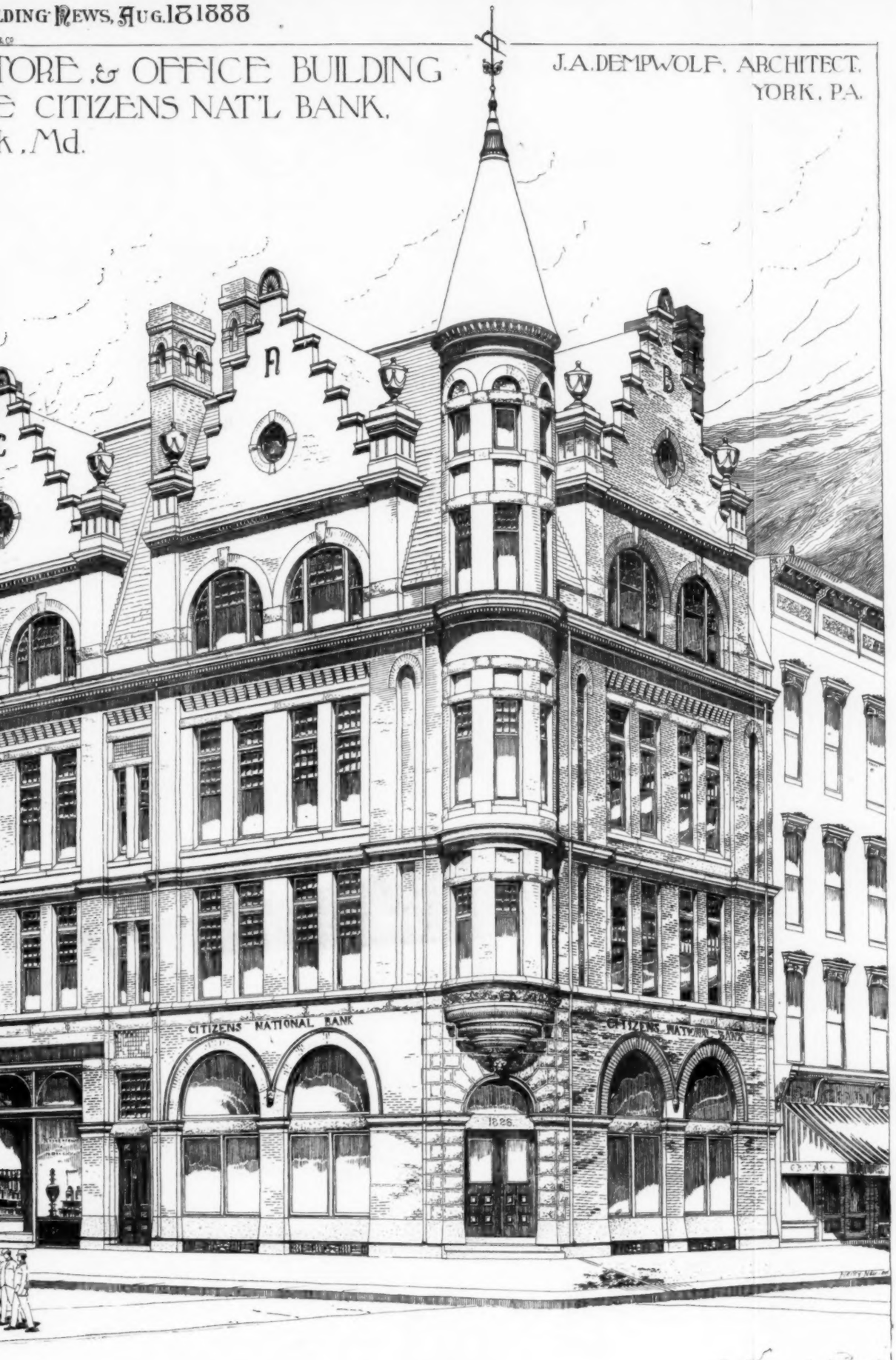
FIRST FLOOR.



THIRD FLOOR.

TORE & OFFICE BUILDING
E CITIZENS NAT'L BANK.
k, Md.

J. A. DEMPWOLF, ARCHITECT.
YORK, PA.



Heliotype Printing Co. Boston.

clearly and strongly given for the whole scheme of landscape gardening and architectural details to be applied to these four simple rectangular spaces — some two hundred and fifty feet long and about fifty wide — by the overpowering influence of the monument, as it stands the crowning feature of each — approached from any direction — that it would have been difficult to go astray. A man whose artistic training in that line had been of the French school, would probably not have hesitated a moment. The situation seemed most distinctly to call for a total abandonment of the "picturesque" and the closest adherence to the "monumental" (the "conventional" if you will), with copings and parapets and terrace steps and balustrades uniformly of granite or white marble, and the designs for fountain, or lamp, or pedestal of the purest Classic detail. What has been done is in a different spirit. The spaces have generally been laid off in curved and wandering forms of grass-plot and pathway, so large in scheme that the design is lost before one can grasp it. The rather fantastic forms of copings and parapets are formed of as many as five different kinds and colors of stone and concrete preparations, while the smaller details of iron lamps and railings would be more appropriately placed as part of the decoration of a "Café chantante"; and even the brilliant masses of flowers set into the well-kept turf and changed with alternating seasons, however charming as a detail in itself, do not perhaps add to the general harmony of the whole, where the many parts already have so little sympathy with each other.

While the south and east parks contain no other details worthy of comment, we may turn to those on the north and west and find there certain special features of interest in the various bronze groups lately given to the city by Baltimore's conspicuous art-patron, Mr. W. T. Walters, and while we may not be willing to abandon all criticism at this point we cannot but recognize with pleasure and gratitude the disinterested generosity, public spirit and artistic impulse that prompted these gifts, so far outstripping, from the point of view of art, anything of the kind that has yet been done in our city; and we may safely assume that Mr. Walters is himself too much of an artist in feeling not to recognize the fact of how rarely — very rarely — such things are accomplished with absolutely perfect and satisfactory results, or to object to criticism made with full appreciation of the difficulties that stand in the way.

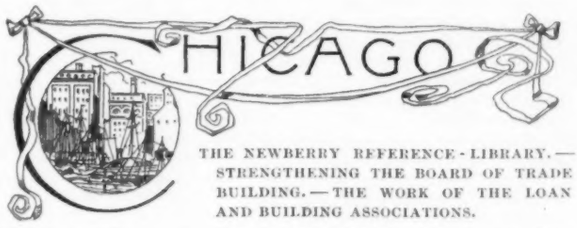
The last of these gifts, presented to the city some months ago and the most conspicuous in size, is the statue of the late Chief Justice Taney, an exact reproduction of the bronze a short time previously placed in the State-House grounds at Annapolis from the original of the sculptor, Rhinehardt, a plaster cast of which also stands in the gallery of the Peabody Institute. Rhinehardt, as well as Judge Taney himself, was a Marylander, and Baltimore was, at different times, the home of both, but, never having seen the Chief Justice in life, the artist was forced to depend on photography as his only means of producing a portrait. While the more intimate friends of Judge Taney are not unanimous in their opinion as to the faithfulness of the likeness, the general effect of pose in the sitting figure, naturally and gracefully draped in the voluminous folds of his robe of office, has something in it of repose and dignity that is very satisfactory and typical of an ideal Chief Justice. The statue is colossal and raised upon a rectangular granite pedestal, unfortunate in the very commonplace and heavy projecting mouldings at the top that detract from the scale and detail of the bronze and have no *raison d'être*.

In the middle of the west park is a large circular basin with granite coping, at the centre of which low and closely-massed water-jets spring from the conventional cat-tail and lily-pad design. Around this basin, but at some distance from it, on the diagonal axes, are placed the four bronze reproductions of the Barye groups on the Louvre, "Peace," "War," "Force" and "Order," considerably reduced from the size of the originals, though quite large enough to be very interesting bronzes in themselves, — but so disposed as to form no part of the design of the fountain, — and standing thus isolated they become somewhat insignificant in themselves. If they had been massed nearer the centre and made to form a part of a general scheme of fountain decoration, with the lamps etc., (which are now utterly insignificant), the arrangement could not have failed to be more satisfactory than at present. At the extreme east and west ends of this park respectively stand, quite isolated on their own pedestals, Barye's sitting Lion — typical of brute force in repose, and Dubois's "Warrior" as a "pendant," suggesting human force in repose, not the less beautiful perhaps from the suggestion it presents of close inspiration from Michael Angelo's Medici, "the Penseroso." All these bronzes stand on granite pedestals, in form severe to the limit of crudeness, with the same defect noticed in the Taney pedestal of heavy projecting cap mouldings, which in these smaller groups was so obtrusive that they were considerably reduced after being placed in position. The rather surprising fault has been committed of placing a bas-relief on a much diminished scale, of another of Barye's lions as a panel in the pedestal that supports the big animal, so that we have the result, usually to be avoided, of groups of sculpture of both man and beast to five different scales in the narrow limits of the one park, and closely associated with each other.

Also, the pedestals and the casts seem scarcely to belong to each other. The lower portion of each cast being merely an irregular mass of bronze, forming part of the detail of the group, not resting naturally upon the granite, and needing the addition of a lower rectangular bronze plinth as a base.

Fronting on this same west park is the broad façade of the Robert Garrett house; a very architectural though not strikingly interesting piece of work, by McKim, Meade and White; but quite famous on account of its legal controvesy with its next-door neighbor; — and but a few steps from it is the very modest front of Mr. Walters's own house where, whoever passes under its small Classic portico with the anticipation of keen artistic enjoyment in the treasures of its interior, will surely not be disappointed.

In the immediate vicinity have also lately been erected several of the most pretentious and expensive houses that have been built in the last few years, but whose architectural merits scarcely call for any special criticism.



THE NEWBERRY REFERENCE-LIBRARY. — STRENGTHENING THE BOARD OF TRADE BUILDING. — THE WORK OF THE LOAN AND BUILDING ASSOCIATIONS.

FOR several years past the people of Chicago have been looking forward to the time when a commencement should be made upon a collection of reference-books, which promises to be among the very finest in this or any other country. A sum amounting to something like two and a quarter millions of dollars, bequeathed for the purpose of a reference-library by a late citizen of Chicago named Newberry, has been in the hands of a board of trustees for some time. All the city papers have at various time (noticeably when more interesting subject-matter was wanting) lashed themselves into states of great frenzy because the Newberry Library — as it is to be called — was not pushed and everything done in a minute. The trustees, however, have apparently been slowly, surely, and it would appear wisely working all the time with a definite aim and end in view, so that at length the public now begins to see the first results of this labor. The trustees commenced by selecting as librarian the eminent Mr. William F. Poole, who besides making himself widely known by work strictly in his own line, has also interested himself deeply in library construction and written one or two pamphlets upon that subject — publications that attacted more than ordinary attention. Since the appointment of Mr. Poole as librarian the collection of books has commenced, though upon a somewhat limited scale, and now the volumes already purchased are temporarily housed in buildings directly opposite the square which is eventually to be used as the permanent home of the library.

For over a year the members of the architectual profession have known that the trustees were liable at any moment to appoint an architect for the new edifice which they intend shall be the most perfect building of its kind yet erected. Very wisely it was decided that competitions were, above all things, to be avoided, and that in order to have a satisfactory library, the trustees and librarian would have to work out their problem in conjunction with an architect in whom they should have perfect confidence. Although a decision was reached sometime ago, it is only since the last Chicago letter that the name of this architect has been made public. Mr. H. I. Cobb, of the present firm of Cobb & Frost, is the gentleman selected for this important task. Mr. Cobb retires from the firm and for one year devotes himself exclusively to this building: a portion of his time to be spent in travel both in this country and in Europe, visiting all libraries of importance.

The ground selected for the location of this important building is one entire square which, it is expected, will eventually be completely covered by the edifice. At present, however, only one wing (if it may so be called) is to be built and it is expected that this will afford sufficient accommodation for the collections that shall be made during the next score of years, thereafter additions will be made as the needs of the library may require. The profession will await with some curiosity for a sight of the accepted plans, since the librarian has ideas of his own on this subject which are totally at variance with the accepted usages; in fact, if his conceptions are followed out as a basis of general arrangement, it will be a veritable revolution in library building. And yet his general plans after much opposition have at length received the support of the principal librarians of the country.

The air is again full of rumors about the Board of Trade Building. One has it that the tower is to be pulled down, another, that the entire building is to be razed to the ground, etc. The fact seems to be that a portion of the building will probably be held up on screws and the foundations strengthened. Such a very common proceeding as this, where we are always having something really remarkable going on in the way of raising or holding buildings, would ordinarily pass almost unnoticed, but in this case we are being treated to a more than usually wordy discussion, and this time, unhappily, it is stirring up bad blood amongst the architects. Unfortunately, the tower of the building was not built quite plumb, and certain parts of

the building have settled more than was anticipated. These and several other things taken together have given the friends of certain architects (who hoped originally to build the building) a chance to call upon these same architects for opinions, which, apparently, they have hastened to give not only to members of the Board of Trade, but to every one in general, and that in a most self-laudatory manner and seemingly quite forgetful of all professional etiquette. They criticise not only the condition of the building itself, but also the architect, the old building-committee and everybody in general who did not originally favor their plans. Naturally, the architect feels greatly stirred up, and he, in his turn, forgets professional dignity, and writes an open letter to one of the daily papers, wherein he mentions no names but gives a most cutting reply, illustrating his point that those who live in glass-houses ought not to throw stones, by some examples more forcible than dignified. It is to be hoped that this will end the affair, which is more than usually to be regretted owing to the fact that all the parties are members of the American Institute of Architects, which is supposed to represent the best elements of the profession. At any rate, it is to be hoped that they will not consider it necessary to wash any more of their dirty linen in public.

Some agitation has lately been aroused relative to the advisability of placing the Loan and Building Associations here under some supervision of state officials, and thereby, if possible, more effectually guarding the interests of the shareholders. Owing to this agitation some very remarkable statistics have been published, whereby it is shown the enormous number of people who are connected with these saving institutions and the vast interests that are at stake. There are now said to be in running shape and flourishing condition over one hundred of these societies in the city of Chicago alone, and the suburbs are full of them. During one month, ending June 25 last, 229 mortgages were recorded by building-associations, while the sums loaned reached the surprising aggregate of $385,000. This would bring the annual total to nearly $5,000,000, which, it is said, will probably be exceeded this year. This, at the average loan of $1,250, means about 4,000 builders of homes who are furnished with capital, while the whole sum of $5,000,000 represents the earnings of nearly 60,000 families. Such a vast number of people as this implies is a great surprise to most persons, although it was in a general way recognized as a fact that large numbers were interested in these institutions. This showing of home-builders is one of the most gratifying exhibits of the building-department this year, and when good citizens think of the Haymarket riot they are duly thankful to see that by the building-associations alone 4,000 families are annually being turned into capitalists, whose interests are to suppress lawlessness and anarchy, and so help see that order is preserved and the laws justly enforced.

LONDON

THE METROPOLITAN BOARD-OF-WORKS SCANDAL. — LIMITING THE HEIGHT OF BUILDINGS. — RESPONSIBILITY OF AN OFFICIAL ARCHITECT. — THE ITALIAN EXHIBITION. — THE GOVERNMENT SCHOOL OF ARTS PRIZES. — THE LIVERPOOL CATHEDRAL SCHEME.

I HAVE from time to time let drop hints as to the existence of grave scandals in connection with the Metropolitan Board of Works. Rumors of a very disquieting character had been flying about London till at last Parliament appointed a Royal Commission to inquire into the whole matter, and see if these unpleasant rumors had any foundation in fact. The inquiry is now being held, and to quote the words of the noble lord, the Chairman of the Board, "is proving painfully successful."

London — this huge, ungainly, overgrown metropolis of England — has for many years labored under a considerable disadvantage with regard to its government. It is too large to be grouped together under one municipal authority, as are our other large towns, therefore recourse has been had to what are termed the vestries. These vestries are, in reality, the parochial councils of the various parishes of London, but with somewhat enlarged powers. The functions of these vestries or district boards-of-works — for they are called by either title — are various. The collection of the rates, the maintenance of the roads, the efficient lighting and drainage of the district, and various questions of sanitation and medical inspection form part of their duties — indeed, they are closely analogous to such bodies as local boards-of-health and urban sanitary authorities. The jurisdiction of each vestry, however, is confined within its own boundaries, and, therefore, it was found necessary to form a central authority which should take up and discharge those duties which the vestries were unable to perform. Each vestry, therefore, elected one or more of its members to form part of this central executive body, which was termed the Metropolitan Board of Works. As time passed on fresh duties were continually given to this Metropolitan Board until at the present time, there is no municipal body in England at all approaching it in power. It has the control of revenues exceeding those of some of the small Continental kingdoms. To it is entrusted the execution of many Acts of Parliament. It examines our theatres and controls our fire-brigade. Under the Artisans'-Dwellings Act, it can, by a single resolution, depopulate and raze to the ground large tracts of our most densely populated districts. It can also, if it thinks fit, cut new streets right through the centre of London, acquiring the necessary land by compulsory purchase. Vast engineering works, as for instance, bridges, sewage-outfalls and such works as the Thames Embankment, come within its domain. It controls our parks, determines our building-lines, appoints our district surveyors, in fact, it is difficult to say where its powers end.

It will at once be seen what a power for evil this body would become if it exercised its functions in an unjust or partial manner. Indeed, as one of our great daily papers recently observed, architects, surveyors, builders, etc., wait on its very nod, for with one stroke of the pen it can make or mar their fortunes.

With this preface, it will be at once understood what a sensation the revelations before the Royal Commission have made. The whole Board seems infested with bribery and corruption of the very worst kind. First one official, then another is implicated, wholesale intimidation is revealed, and now even some of the members — whose conduct should surely be above suspicion — are shown up before the public in a light the reverse of pleasant.

Worst of all, it is in the Architects' Department that all these delinquencies are being discovered. The arch-offender was a Mr. Robertson, Chief of the Department, which supervised the letting and sale of sites. This *modus operandi* seems to have been this: Robertson, of course, was aware of the sites which were about to be let, and he kindly kept his friends outside the Board informed as to those which were particularly eligible. He was also obliging enough to let them know the lowest price the Board would take, and suggested that if they made a certain offer he would advise the Board to close with the offer. The Board usually did so, and consequently Mr. Robertson's friend was fortunate enough to get the coveted site many hundreds of pounds cheaper than he would have done in open competition. Of course, it would be only the proper thing to recognize Robertson's kindness by a little present, and a small cheque, therefore, generally found its way into Robertson's hands. It has been calculated that these small cheques have amounted to many thousands of pounds. Since the appointment of this Royal Commission Mr. Robertson has thought it prudent to place the seas between himself and his old business haunts.

Another official — one of those gentlemen who evidently combine the *suaviter in modo* with the *fortiter in re* — who has been in the employ of the Board for, I believe, twenty-seven years, has proved as clever as Mr. Robertson. His son, evidently a chip of the old block, whose duty it was to supervise the letting of the Board's public houses, sorrowfully admitted that, during his tenure of office, one tenant had actually obtained a lease without bribing him.

I could go on telling you such stories for many a long page. I could tell you how plans were delayed on every possible excuse, if the official palms were not greased; I could show you how every conceivable obstacle was placed in the way of those who wished to do business in an honest way; I could tell you of many instances of members using their position for their own pecuniary advantage, but I refrain.

It is hard, no doubt, for those members who have managed to keep their hands clean in this slough of despond. The public is very apt to judge the whole by the actions of some, and in its anger to condemn unheard those whose record is unsullied. All honor be to those who have kept themselves clear, but I very much fear that the somewhat cynical proverb, "Virtue is its own reward," will be found applicable in this case.

With one characteristic anecdote I will leave this subject. A Mr. Villiers was about to erect a large music-hall in Piccadilly Circus. He accordingly went to an eminent and highly honored firm of architects — Messrs. Isaacs & Florence — and appointed them his professional advisers on one condition, viz., that they should find some builders who would be prepared to carry out the whole of the works, reserving payment till the conclusion. Mr. Isaacs explained that the condition was a somewhat hard one, but he would do his best. He tried and succeeded, and accordingly proceeded with the plans.

Things went merry as a marriage-bell until sometime after Mr. Isaacs's appointment, Mr. Villiers received an intimation from a certain quarter that if he wished his plans passed quickly, he had better go and see a certain architect, a member of the Board: otherwise very considerable delay might ensue. To Mr. Villiers time was money, and consequently an interview was arranged between this member and himself. The member was quite surprised to see him, but thought he might possibly undertake the work. "But," objected Mr. Villiers, "You cannot vote upon your own plans at the Board." "No," replied this architect-member; but, he added, with a shrug of his shoulders, "There are other ways of killing a cat besides hanging him." Mr. Villiers perfectly understood, and this member was duly appointed architect to the building. The matter was explained to Messrs. Isaacs & Florence, who did not, however, quite acquiesce in the arrangement, and brought an action against Villiers. This was ultimately settled by Mr. Villiers paying

£100 as compensation to his old architects, which £100 was repaid to Mr. Villiers by his new architect member of the Board, and the plans were duly passed. This member is a Fellow of the Royal Institute of British Architects, an Alderman and Magistrate of the city of London, a Fellow of the Society of Antiquaries and of the Royal Geographical Society, and an aspirant for a seat in Parliament. I am afraid that now he will not succeed either in filling the Lord Mayor's chair or in getting into Parliament. His conduct in this and other matters is hardly appreciated either by his fellow-aldermen or by the Royal Institute of British Architects, whose Council have, in fact, applied to the Royal Commissioners for an official copy of the evidence with an obvious purpose.

We have had another little outcry about high buildings. This time it was sought to extend those enormous edifices, termed Queen Anne's Mansions, near St. James's Park Station. Certainly their extension would be no great addition to London's architecture, for a duller and more lifeless elevation can scarcely be imagined. The public, however, seem determined to have no more high buildings, for a bill has been introduced into Parliament for the purpose of limiting their height proportionately to the width of the street. Some such regulation is certainly needed, as there is now no restriction at all upon the height of buildings.

An interesting law case is promised us in connection with the London School Board and their late architect, Mr. E. R. Robson, F. S. A., now, I believe, the consulting architect to the Education Department. Immediately after the passing of the Education Act, a large number of elementary, or board schools as we call them, were erected all over London. It was notorious at the time that the contracts were rather "cut fine," but some recent excavations at a school at Ratcliffe Highway disclosed the fact that the concrete foundations were extremely defective, so much so in fact as to have threatened serious damage to the school. This bad work was, therefore, as soon as possible removed and replaced by better; but now the School Board have passed a resolution stating that the architect is personally responsible for the damage caused by this bad work, and have instructed their solicitor to take action against him. Mr. Robson's contention is that an architect is not personally pecuniarily responsible for inferior work, and that, moreover, the immense number of buildings whose erection he had to simultaneously superintend made it absolutely impossible for him to be responsible for the quality of each individual brick or hod of mortar. It will be interesting to watch the progress of this case.

In speaking of the Italian Exhibition which is now being held at Earl's Court, I should like, first, to congratulate the Director-General, Mr. J. R. Whitley, upon the great success he has achieved in his enterprise, which is the more remarkable seeing that he has not been subsidized or even received moral support from the Government. The *Nineteenth Century*, referring to the American Exhibition held on the same site last year, asked: "When was ever such an exhibition held in a foreign country, without Government assistance, by any other nation in the whole annals of the world?" And I consider the Italian Exhibition more complete and representative than the American.

The first thing that strikes one in a careful survey of the industrial products of modern Italy is the artistic feeling which has been displayed in their manufacture. The artificer seems to have been imbued with a desire to carry out his work in an attractive manner altogether different in spirit from the mechanical, lifeless article that we are unfortunately too accustomed to see in England. Indeed, the national Italian character seems thoroughly displayed in these works, and unluckily, their bad points are to be seen as well as their good ones. We find symptoms of unrest and a desire, so to speak, to attract more than to please. The same spirit which animated Bernini and Borromini in their eccentric and unhappy vagaries seems but too apparent in the modern Italian school, and they seem unable to grasp the fact that there is a beauty and grandeur to be found in a simple, even if severe work, for which no amount of rococo ornament or artistic eccentricity will form an adequate substitute.

Precisely the same feeling can be traced in the pictures and sculpture. Here we find that modern Italian painting is impressionist to a degree. Mr. Martin, in an interesting preface to the catalogue, is evidently quite aware what line the criticisms on the pictures will take, for, referring more particularly to the productions of the modern Milanese school, he says: "To the English public the works of Morbelli and Legantini should prove of no small interest as the creation of a new school of what is now-a-days so much misunderstood as 'impressionism.' Whatever may be the criticisms to which the works of these artists are open, here, at least, we have the genuine expression of the painter, the 'impression' of the scene which presented itself to his eye as he sat down, brush in hand, to transfer to the canvas his impression of nature. Approached in the spirit of prejudice which too often influences us all in our appreciation of works of art, it is not difficult to imagine that the works displayed in the several rooms devoted to the Milanese artists will meet with some degree of severe criticism, but judged from the standpoint of genuine art, these twenty or thirty canvasses are worthy of much reverence if only on the score of the genuine and unborrowed individuality with which they are stamped." A clever apology, but an apology all the same, and one which, I am afraid, will not suffice to convince the art-appreciative public. One plea of Mr. Martin's deserves more than a passing notice, and that is where he dwells on the individuality of modern Italian art. This is certainly one of the most striking features of this exhibition, for the vacillating and dependent character of Italian art during the last century seems likely to be replaced by something original, which may ultimately develop into a really interesting school.

There are over a thousand pictures exhibited, but it is difficult to account for the honor bestowed upon a considerable proportion. Unless it was the intention of the hanging-committee to provide us with assorted specimens, good and otherwise, they might with advantage have reduced their collection by two-thirds, and gone in for quality rather than quantity. Still, some of the pictures are painted with great force and vigor. I was struck particularly with Joris's "Flight of Pope Eugenio IV," and two pictures by Jacovacci and Cammarano, lent by His Majesty the King of Italy, are worthy of a place in any gallery. A very powerful picture is one of Natale Attanasio's, representing some mad girls in chapel, and two huge canvasses depicting ancient Classical scenes are painted with a care unusual in pictures of so large a size.

The sculpture is open to the same criticisms as the industrial art and the paintings, and there are very few really good examples of earnest work. In the majority of instances too much attention seems to have been paid to details to the detriment of the works as a whole. Still, some of the examples are remarkably quaint and will doubtless please the taste of the exhibition sight-seers. An interesting feature of the exhibition is a reproduction of the Colosseum of the exact dimensions of the original. Here a display is given of the old Roman games. Altogether the exhibition cannot but prove beneficial to both the Italian and English nations.

I went into South Kensington Museum this afternoon to see the Exhibition of the Prize Works of the Government Schools of Art. This is very interesting, more especially as regards the industrial art. Designs for lace, ironwork, tiles, wall-papers, carpets, etc., are all exhibited, and it certainly behooves the Government to foster these mechanical arts possibly to a greater extent than the pure arts of painting, sculpture and perhaps architecture.

The architectural works were very unsatisfactory, and as I walked up and down the screen upon which they were hung, I doubted very much whether the Government is really conferring any benefit at all upon the country at large or the profession in particular by offering the prizes that it does. With the exception of a set of measured drawings that had previously done duty at the Royal Institute of British Architects and a design for a cathedral, I do not think a single one of the exhibited drawings would have stood the least chance at one of the Royal Institute of British Architects or Academy competitions, and it is quite clear that the first-class men are not attracted by this competition. There is no doubt whatever that the funds used in the National Competition might be employed to much better purpose if used for purposes of instruction rather than for prizes. It does seem to me to be such a pity that the great establishments for architectural education do not combine their forces and set this matter once for all on a firm basis. Take, for instance, what is, I am sure, destined to become, some day, our English Ecole des Beaux-Arts, the Architectural Association. Although this school does so great and so valued a work, and although nearly all our architects of the present day have received their education there, yet it gets really no help at all from extraneous sources, with the exception possibly of the Royal Institute of British Architects.

Again, the Academy holds itself quite aloof from the other architectural bodies, and the Government Schools of Art are very little in sympathy with either the Association or the Academy. Yet if these three institutions and the Royal Institute of British Architects were to join hands and work together for the good of the profession as a whole, the result would be extremely satisfactory to all concerned, and England would possess an architectural school second to none.

I am indebted to the *British Architect* for reminding me, with regard to the Liverpool Cathedral Competition, that the committee never actually selected Mr. Emerson's designs. This is, I believe, the case, but it will be remembered that Mr. Christian, the assessor, in his report summed up strongly in favor of Mr. Emerson's design, and it was pretty generally understood to the profession that his designs would be adopted. The point, however, that I wished to lay particular stress on was the childishness of having a competition for the design of the proposed cathedral before a considerable proportion of the required funds were either in hand or in prospect. I hear, now, that the idea of building a cathedral has been definitely abandoned for the present, owing to the extreme difficulty in raising enough subscriptions.

CHIEL.

SILVER BELL METAL. — It has long been thought an excellent thing to mix silver with the other metal when a bell was to be cast, says the *New York Sun*, and many pious persons have rejoiced at the thought that the silvery chime of the bell was in part due to their gifts. Now comes a writer in an English scientific paper with this paragraph: "I once asked a foreman in a well-known bell foundry whether putting silver in a melting-pot was of advantage. He replied, of great advantage — to the founder, as the silver sinks to the bottom; the founder pours off the copper and tin, and when the silver has cooled, puts it in his pocket."

NOTES AND CLIPPINGS

A National Reservation on the Rio Grande.—The propriety of a bill introduced a day or two ago by Chairman Holman, of the committee on public lands, into the United States House of Representatives, to set aside a large tract of land near Cochite, on the Rio Grande, in New Mexico, as a national reservation, on account of its many archæological remains, was illustrated and confirmed by the Honorable Amada Chavez, one of the leading citizens of the territory who lives not far from that section of country. He discovered a short time ago, one mile north of the little town of San Macto, the ruins of an extensive city, the existence of which had never even been suspected before. The action of the wind had covered the larger portion of the ruins with sand and other detritus, and converted the whole into an extensive mound; and it was only a severe rainstorm and cloudburst, sweeping away one angle of this mound and disclosing some heavy stone walls that made the discovery possible. Mr. Chavez has since uncovered one or two of the ruins and obtained a number of interesting relics A skeleton was found having three strands of beads around its neck — one of turquoise, one of jet and the other of bone. There were also large ear-rings of jet and turquoise with the skeleton and remains of the hair, which was not black, but light brown, besides ornamental pottery and arrow-heads, with a quantity of maize, partly carbonized. This skeleton with the articles enumerated, was found in a small chamber of masonry built up with a very adhesive cement. The excavations thus far made have discovered a large building with massive stone walls and a tower at each corner. It looks more like the remains of a citadel than an ordinary dwelling. The masonry is of the best kind, and the interior chambers are plastered and painted white. In the centre of this structure was found a water reservoir, from which stone aqueducts led in many directions. A dim tradition among the native Pueblo Indians located here a prehistoric city named Guato, which was still in existence at the time of Cortez's coming to America. — *St. Louis Globe-Democrat.*

Old Statues for Sale.—The sculptors are rather playing it on this much discovered country. The world is full of Columbus statues, and there being no chance of more commissions in this line an enterprising sculptor worked up the claims of Leif, the son of that old pirate, Eric the Red, as a discoverer of America. Boston and Milwaukee were vaccinated with the Leif virus and invested in statues, which are really beautiful to look upon as works of art. Nobody else going in for Lief statues, Sculptor Story is now engaged in preparing an article on the discovery of America by Jean Cousin of Dieppe, before the landing of Columbus. This rivalry of the discovery claims will doubtless go on until the sculptors have sold off all their old stock to make way for the new styles. There was that Welshman with the hydrophobic name of Madog, who is said to have come over here with a colony in 1170. He will have to be set up in bronze somewhere. And also that John of Rolno, who was a countryman of the gentleman over whose fall Freedom is said to have shrieked — Mr. Kosciusko. This forerunner of ex-Alderman Rudzinski, John of Rolno, is said to have come over here in 1477, some twenty-one years before Columbus's third voyage, so a statue in his memory will probably be set up at the corner of Pulaski and Sobieski streets, in this home of the oppressed of all nations. Nicolo Zeno also should have a show. He sailed from the open sewers of Venice in 1380, and discovered America. This is probably a lie, but it is a good enough story to enable some sculptor to work off an old bust of Ben Butler for a bust of Zeno. — *Milwaukee Sentinel.*

An Old Colonial Mansion.—A correspondent of the Richmond *Dispatch* describes a very old house in Rowan County, three miles from Salisbury:

"This house, from a tablet over the front door, was built by Michael Braun (now spelled Brown) in 1776, and is still owned and occupied by his descendants. The fireplace is eight feet wide, five feet high and five feet deep — sufficiently large to roast an ox, and of sufficient size to contain over a cord of wood. The house is 40 by 30, two stories, and is built of granite obtained near by; windows arched with granite blocks about the size of bricks, laid in mortar, now so strong that it would require a sharp pick and a strong arm to remove it; walls three feet thick; doors and window-facings of black walnut, and the house covered with cypress shingles, which were in such a state of preservation that they have only been removed since 1880. Those shingles must have been wagoned from or near Charleston, South Carolina, 180 to 200 miles. The house was built on the then great travelled road from James River to the Catawba Indians by the trading ford on the Yadkin River. This ford was the home of the Lapona Indians when Lawson, who was sent from England by the proprietors, visited it in 1700.

How Vancouver was built.—A gentleman who arrived in Boston yesterday fresh from Vancouver, the Pacific terminus of the transcontinental railway, gives the genesis of that city in terms which are as startling as they are significant. Two years ago there was but one house in the locality. A year ago there were a dozen straggling log huts. To-day there is a population of 5,000 persons; the Victoria Hotel is one of the finest houses in the country, charging $4 a day and worth it; the main street, built through the virgin forest, as it stood a year ago, is flanked by granite blocks that rest where stumps fifteen feet or more in diameter have been blown out by dynamite; the town is lighted by electricity; there is semi-weekly communication with China and Japan by steamship, and the Canadian Pacific keeps the northernmost city on the Pacific coast in daily communication with the eastern world. All this is substantially a year's work. Other places of this size, or even greater, have sprung up in a night like Jonah's gourd, but it is believed that there is no record on the American continent of the building of a similar town, with all the improvements of modern civilization, within so short a space of time. — *Boston Herald.*

A Magnetic Hook.—A new application of magnetism has been found in connection with a crane for moving steel at the Otis Steel and Iron Works at Cleveland, United States. It consists of an electro-magnet made out of two bars of soft iron fourteen inches long and three inches in diameter, connected at the top by a third bar. Coils of wire are wound upon the magnet, and are connected in a circuit of a dynamo which is used to energize the magnet. The current is shunted out of these coils by the means of a switch, operated by the person directing the movement of the crane. The various magnets used for this purpose have an attractive force of from 150 pounds to 800 pounds, according to the size of the billets of metal required to be carried by the special crane. One peculiar point learned in connection with this magnetic substitute for the ordinary hooks used on cranes, was that the magnet would attract the chain above equally well with the mass below, and lifting chains used on the crane were consequently entangled in the most puzzling snarl until ropes were substituted. It is quite possible that this apparatus affords an excellent field for the brass chain made by the electric-welding process of Professor Elihu Thomson. — *Engineering.*

TRADE SURVEYS

There are signs of a revival of demand in textile products, iron, lumber, petroleum; also signs of an improving demand for our cereal and cotton products. Lumber journals speak of an improving demand in most of the Western and Southern cities. In Chicago, Minneapolis, St. Paul, Omaha and Kansas City the recent building operations have greatly exceeded this time last year. Great activity prevails in the far off towns in the West and South. Considerable activity now prevails in the smaller towns in the New England and Middle States. Under this steady demand stocks of building material have declined. Wholesalers have been slow about permitting stocks to accumulate; within the past week or so a good many wholesalers have concluded that now is a good time to begin to place orders for material to be used during the coming winter. This activity extends to traders in a number of directions. Business men with one set of views say that if the election turns out to suit them, it will result in a great increase of business, while those with opposite views make the same statements for their side. The views will probably manifest themselves in this way that no matter which way the national election goes there will be an improving demand for material. It is evident that there will be a large amount of material needed for mill and shop building in those regions of the country where building can be conducted in cold weather. It is an assured fact, however, that a large amount of railroad-building will be done, for contracts have been placed within a few days for orders to be delivered next year in the Northwest and Southwest. The rolling-stocks on most of our roads are running down and requirements will be large, but leading railroad managers intimate that there will be a general effort made to replace worn-out stock next spring. Railroad managers will restrict expenses within the narrowest limits possible. Most railroads are doing a better business. Net earnings of leading systems, when compared with net earnings of last year, show a falling off, and it is thus a motive of great economy but the resulting effects will be productive for good in the cheapening of the cost of transportation to shippers and the general public, and to railroad stockholders themselves. According to the best information from reputable railroad authorities throughout the East, it appears to be a reasonable statement to make that there will be a marked increase in railroad-construction. There is not much doing at present, but large future possibilities.

The lumber trade has improved lately in order to cover large requirements in the winter. The prices have been well maintained. White and yellow pine continue in good demand. There has been very little slashing of rates or dumping of stocks on overcrowded markets. A rise for September is probable. The certainty of a rise in the coal trade has stimulated demand to an unusual point, and the weekly production is now about 600,000 tons. The bituminous production which is shipped southward is above last year's production. The iron trade reports very little improvement, but consumers everywhere are withholding all but absolutely urgent demands. Textile manufacturers are slacker than a month ago, but there is a good deal of business doing. Boot and shoe manufacturers, though complaining of competition, are still getting out of the position which strikes have put them in during the past two years. The manufacturers of staple hardware are endeavoring to restrict production in order that moderate margins may be maintained. Associations throughout the various industries are most of them in a healthy condition. They have succeeded in advancing prices except in one or two instances, but they are accomplishing more permanently satisfactory results in preventing the gorging of the channels of trade. Production and consumption were never more evenly balanced than now, and traders are complimenting themselves on the accomplishments of these results. The bankers are prompt in their accommodations and money-lenders who loan on mortgages and who purchase stocks and securities are holding bark, although the rank and file investments should furnish wool, for the stock manipulators are keeping theirs where it belongs. There is less speculation throughout the United States than has been known for years. Enterprise is more determined and there is more opportunity for good investments than ever. The tables of stock furnished from week to week for financial and commercial manufacturing and mining and in other directions when carefully scanned and compared with reports of former years, furnish the conclusion that the condition of wage-workers is better, that prospects for investment are more encouraging, that manufacturing interests will be more evenly engaged hereafter, even when compared with the booming years of the past. Trade is organizing itself, capital is becoming more conservative, labor is becoming more cautious. The underlying laws which control all are being more clearly observed and obeyed. The great underlying conditions of trade and commerce are being studied by leaders in industry and commerce, and the lessons which are taught are not wasted. Important interests are arising before the people, and when they investigate them, there will be found an underlying intelligence among the masses which will be able to deal wisely with them.

S. J. Parkhill & Co., Printers, Boston.